Route 50 Corridor
Retail Market Analysis
Loudoun County, Virginia

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Prepared for

Loudoun County
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EXECUTIVE SUMMARY

The Route 50 corridor is an east-west arterial road that passes through the southern portion of Loudoun County connecting Fairfax County and points east to the rural parts of Northern Virginia. The corridor is located within the Dulles South Planning Area, a 25,100 acre portion within the Transition and Suburban Policy Areas. Two large planned development communities have been developed adjacent to this corridor over the past 10 years bringing approximately 8,000 new households to the County as of 2005.

As one of the last areas in Loudoun County to experience development pressure, the Route 50 corridor has historically been zoned for industrial uses. However, as the surrounding residential population continues to increase, planning efforts have recognized a need for higher intensity commercial uses on the Route 50 corridor. The Board of Supervisors appointed a task force to study the Route 50 corridor and make recommendations regarding desired uses and design. Key recommendations included increasing retail development of a high quality, visually appealing character along and adjacent to the six and a half mile length of the corridor and introducing a new mixed use zoning district to facilitate the desired development and design.

In response to the final report, the Board of Supervisors has initiated an amendment to the County's Comprehensive Plan (CPAM 2005-0007) to include land use policies that allow for increased retail along and adjacent to the Route 50 corridor with specific provisions for the design, land use mix, and function of this retail development.

This report represents the culmination of a retail market study along the corridor for the purposes of making recommendations regarding new retail development and its appropriate placement, phasing, configurations, and mix with other land uses.

To conduct this study, four growth scenarios were evaluated. Two scenarios include slightly varied Loudoun County Planning Department estimates for primary and secondary market area growth between 2005 and 2030. The other two scenarios apply alternative land assumptions. In the alternative scenarios, a suburban, rather than rural, density is applied to the Upper Foley and Upper Broad Run subareas as proposed in the Comprehensive Plan Amendment for these subareas (CPAM 2005-0003).

Analysis of the Route 50 corridor's primary and secondary market areas, an area which encompasses the Dulles South Planning Subarea, has produced the following market conclusions:

- As of 2005, the Route 50 corridor study area/primary market area is underserved overall in convenience and retail goods.
- As of 2005, the Route 50 corridor study area/primary market area is slightly "pre-served" in grocery stores.
- As of 2005, the Route 50 corridor study area's/primary market area's supply of and demand for building materials is approximately "in balance."
- In the scenarios that do not apply alternative land use assumptions, the approved retail projects for the Route 50 corridor exceed supportable retail space through 2030.
- The application of the alternative land use assumptions provides additional demand to support the approved retail projects.
- Of the total supportable retail space, 70 percent is convenience goods retail space and 30 percent is shoppers goods retail space.

If the 811,500 square feet of retail at the Arcola Center is completed as it was approved within the next five to ten years and has a predominantly shoppers goods orientation, two market implications will follow:

- Market demand for shoppers goods will be satisfied through 2030 in all scenarios.
- Market demand for convenience goods will be satisfied through 2030 in Scenarios A1 and A2 and through 2020 in Scenarios B1 and B2.

The potential land use implications of these market realities are as follows:

- High vacancy levels in completed projects as tenants wait to sign leases until market provides additional support.
- Limited development of additional neighborhood centers internal to residential communities.
- Limited development of additional community, lifestyle, and power centers.
- Limited market support for active retail development applications (1,100,000 square feet of retail space at the Arcola Center, the 300,000 square foot Avonlea Plaza, the800,000 square foot Dulles Landing, and the 75,348 square foot Pleasant Valley Village).

These land use implications raise several key questions:

- How should the active retail development applications be addressed given the limited market support for additional retail space?
- How should the Arcola Center be configured?
- How should the Route 50 study area be planned so as to encourage appropriate shoppers and convenience goods retail development and discourage strip mall development?

Key recommendations that emerge from this analysis are as follows:

1. Active Retail Development Applications

- Work closely with the developers during the application approval processes to ensure phased development tied to household and income growth.
- Consider the non-retail components of the active applications for approval before the retail components. Entertainment uses (such as movie theaters and bowling alleys), hotels, and multifamily housing (condominiums and apartments) also represent appropriate uses.

2. Arcola Center Configuration

- Pursue lifestyle center architectural style. The benefits of a lifestyle configuration for the Arcola Center are numerous.
- Work with developers to establish a lifestyle center configuration that allows for an appropriate mix of small format and “big box retailers.”

3. Appropriate Retail Land Use Patterns in Study Area

- Actively pursue the concentration of shoppers good retail in a limited quantity of high quality, upscale retail centers.
- Continue to enforce current policy of steering shoppers goods to arterial and major collector roads.

- Encourage location of convenience goods in neighborhood and neighborhood convenience centers internal to residential communities and in employment supportive centers in offices and industrial parks.

To preserve Route 50 frontage for shoppers goods retail centers and steer convenience goods into residential neighborhoods and into employment supportive centers, the County should consider the following policies:

- Creation of mixed use business district;
- Provision of additional incentives to encourage neighborhood centers in residential communities;
- Reduction of support for community centers and/or encouragement for non-retail uses in community centers to provide partial on-site support for convenience retail goods.

Impacts of New Retail Development

- With appropriate phasing and retail types, new retail development should have minimal impact on existing retail.
- The impact of new retail development on the transportation network will depend on configurations and placement. The placement of convenience goods in community centers on Route 50 will increase congestion on the arterial and collector roads. Alternatively, the placement of convenience goods in neighborhood centers will require additional investments in secondary road networks and infrastructure.
- Retail employment will produce between 4,200 (low growth scenario) and 8,100 (high growth scenario) employees. Given typical retail employee wages, the impact on the tax base will be minimal.
- The introduction of multifamily residential units within or in close proximity to the retail centers may be affordable to primary household earner retail employees and represent a strategy to mitigate the potential impact of additional commutes on the County roads.

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INTRODUCTION

The Loudoun County Department of Planning engaged BBP Associates, Inc. to evaluate existing retail and options for additional retail development in the Route 50 corridor area in preparation for a Comprehensive Plan amendment. This report represents a retail sector market analysis of the Route 50 corridor between the Fairfax County line and Lenah Farm Lane. Issues addressed include the kinds of retail uses sustainable for the study area based on projected demand, the phasing of this retail development over time, the impact of future retail development on existing retail in the study area and county wide, and the viability of specific retail configurations.

The need for this analysis grew from the findings of a task force created by the Loudoun County Board of Supervisors to make recommendations for the creation of a southern gateway along the Route 50 corridor adjacent to Fairfax County. Route 50 links the southern portion of Loudon County with points east in Fairfax County and also serves as a gateway to destinations to the west, including the Route 15 area and western towns and villages. In order to serve the developing residential areas surrounding Route 50 and provide tourism and entertainment opportunities for county visitors, the task force final report called for increased retail, residential, civic, and cultural uses that could enhance the corridor. Specifically, the report called for increasing retail development of a high quality, visually appealing character, such as lifestyle and "Main Street" inspired centers, along and adjacent to the six and half mile length of the corridor between the County line and Lenah Farm Lane.

Current land uses along the corridor include a variety of diverse long term commercial and industrial activities representative of a Commercial Light Industrial (CLI) zoning district, as well as an emerging retail presence in the vicinity of nearby planned communities. The current Comprehensive Plan calls for corridor based and corridor retail among other uses (business, industrial, and extractive industry), yet the CLI zoning designation does not appear to facilitate the intensity and character of retail development envisaged for the corridor.

In response to the final report recommendations and perceiving land use changes, the Loudoun County Board of Supervisors has initiated an amendment to the County's Comprehensive Plan to include land use policies proposing increased retail uses along and adjacent to the Route 50 corridor.

Work Completed

In order to conduct the retail sector market analysis and make recommendations regarding the quantity, configuration, and phasing of retail development, site visits, stakeholder interviews, and meetings with Loudoun County staff were conducted. Analysis of the existing conditions, including the current inventory of retail establishments, commercial building permits, and retail development pipeline information, was completed to conduct quantitative market analysis of the existing retail environment on the corridor and the surrounding region.

The existing and projected retail demand and retail expenditures by store type for the study area and surrounding market areas were calculated in five year increments between 2005 and 2030 and broken out by selected retail categories. A base case scenario and an alternative higher intensity land use plan were examined.

The projected retail expenditure demand was translated into gross supportable retail square footage and compared to the existing and projected retail supply to determine the study area's capacity to absorb additional retail development, the "balance" between supply and demand, and the most appropriate configurations and phasing for the development.

A bibliography of the materials reviewed is located in Appendix I.

Report Organization

The report begins with an overview of the study area, detailing the physical conditions, the history of development on the corridor and planning efforts, project goals and objectives, and an overview of a retail classification system used to evaluate retail options in the study area, A retail market analysis follows with an identification of opportunities for new retail development. Based on the conclusions of the retail market analysis and goals articulated by the stakeholders, retail development concepts are presented in terms of recommended placement, phasing, configurations, and mix with other land uses.

The report concludes with planning considerations and recommendations, such as the need for close monitoring of approved and future retail development, industry thresholds for new retail development, and potential zoning and land use considerations. Development impacts are also addressed. The impact of new Route 50 retail development on existing retail, on the county employment statistics and tax base, and on the transportation network is examined.

OVERVIEW

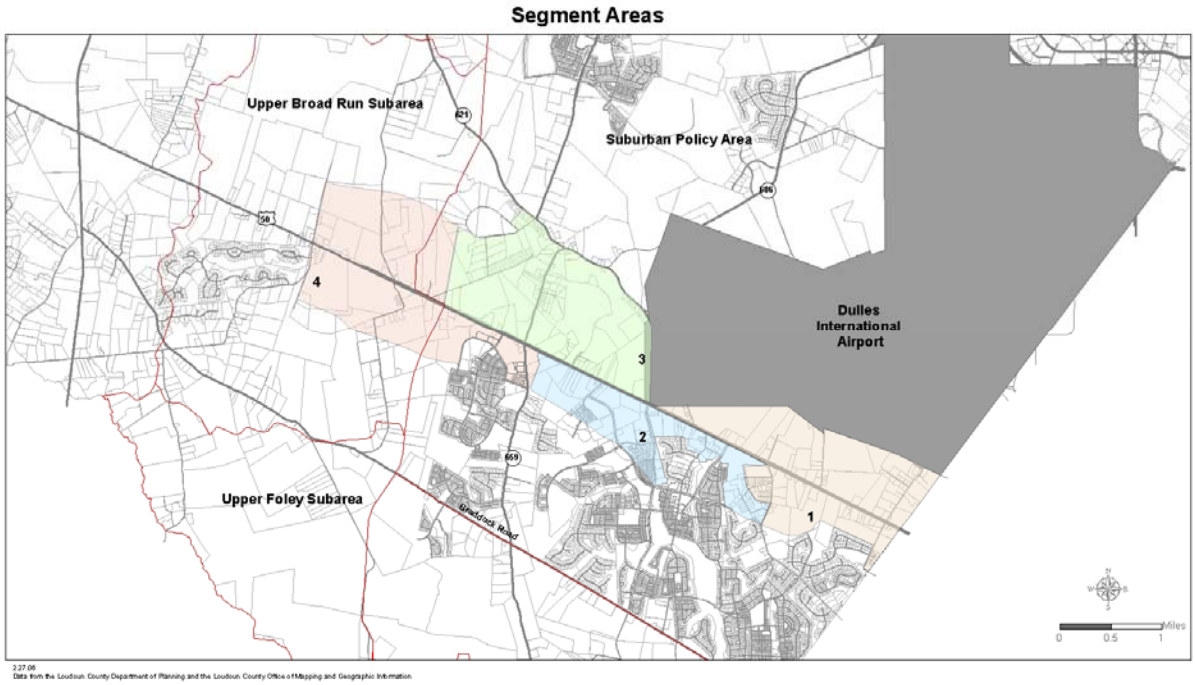
Study Area Physical Description

The six and a half mile stretch of the Route 50 corridor extending from the Fairfax County border west to Lenah Farm Lane is a four-lane divided highway. The entire study area is part of the Dulles South Planning Area, a 25,100 acre, 39 square mile designated Suburban and Transitional Policy Area in eastern Loudoun County. This planning subarea is comprised of one Suburban Policy Area and two Transitional Policy Areas, the Upper Broad Run Subarea and the Upper Foley Subarea.

Segment Descriptions

For purposes of analysis, the study area has been divided into four segments which match the Route 50 Task Force areas.

Figure 1: Route 50 Corridor Study Area Map



Source: Loudoun County Planning Department

Segment 1: The area from the county line west to the South Riding development on the south side of Route 50 and to Route 606 on the north side of Route 50.

Segment 2: The area on the south side of Route 50 from the beginning of South Riding to the proposed intersection of West Spine Road (currently just east of Route 659).

Segment 3: The area on the north side of Route 50 from Route 606 to proposed Route 659 relocated and extending north toward route 621.

Segment 4: The area on the north side of Route 50 from proposed Route 659 relocated to Lenah Farm Lane and on the south side of Route 50 from the West Spine road (currently just east of route 659) to Lenah Road. Segments 1,2, 3, and Segment 4 east of Fleetwood Road on the north side of Route 50 and Goshen Road on the south side of Route 50 are within the Suburban Policy Area and Segment 4 west of Fleetwood and Goshen Roads are within the Upper Broad Run Subarea.

Segment 1 is 2.7 miles long from the county line to Route 606 and includes an area approximately 1200 acres in 155 parcels. The north side of Route 50 lies adjacent to the southern border of the Dulles Airport property and contains several industrial uses, including the Chantilly Crushed Stone quarry. Much of the frontage is undeveloped, as only five scattered industrial sites and the Lafayette Business Center have immediate access from Route 50 and are located directly on the Route 50 frontage. The south side of Route 50 contains the existing residential development of Ridings at Blue Springs. East Gate and Townes of East Gate, two new developments with a total of 193 single family attached and 428 multi family units, are approved for this portion of the segment. This new development is also approved for 140,828 square feet of retail and 62,100 square feet of office space. Gas stations represent existing retail uses in the southern portion of the segment.

Segment 2 is 2.5 miles long and includes approximately 600 acres on over 390 different parcels. The area lies adjacent to the north edge of the South Riding neighborhood. There are scattered industrial sites, and the South Riding Market Square "service-area based" "community" retail center fronts on Route 50 with access from Loudon County Parkway. This community retail center includes a Giant grocery store, a UPS store, a sandwich shop a dry cleaner, a card and gift shop, and a hair salon. Under construction are the Riding Plaza Office Condos, units offering 1,400 to 40,000 square feet of office space. In this segment, 22,900 square feet of office space and 25,450 of retail are approved for a "Main Street" style retail project.

Segment 3 is 2.2 miles long and includes approximately 1300 acres and 160 parcels. The majority of this area is undeveloped; there are three industrial uses spaced along this section of the corridor with direct access from Route 50. In this segment, 811,500 square feet of retail development has been approved for the Arcola Center. Another application has been proposed for the Arcola Center property for 1,620,000 square feet of office space, 1,100,000 square feet of retail, and 550,000 square feet of industrial space.

Segment 4 is 2.4 miles long with approximately 1400 acres and 100 parcels. The north side is almost completely undeveloped with a few scattered structures. The south side is adjacent to the northern edge of the Stone Ridge neighborhood, the second new large scale residential development built off of Route 50. Fronting on Route 50 yet with access from Gum Spring Road is the second "service-area based" "community" shopping center on the Route 50 corridor. It features a Harris Teeter Grocery store, a mattress store, as well as several restaurants and shoppers good retail establishments. The Gum Springs Village Center is an approved project in this segment for 56,000 square feet of retail.

Road Network

Route 50 is the principal arterial road in the Dulles South Planning Area. It links the southern portion of Loudoun County with points east in Fairfax County and also serves as a gateway to destinations to the west, such as the Route 15 area headed toward Leesburg as well as western towns and villages. Two major collector roads intersect Route 50 passing north-south through the subarea. Loudoun County Parkway (Route 606) intersects Route 50 at the western border of Dulles Airport in Segments 2 and 3. It serves the South Riding community south of Route 50 as Tri-County Parkway. This is the County's second most important north-south road after Route 28. Gum Spring Road (Route 659) intersects Route 50 approximately 1 ½ miles further west in Segments 3 and 4. The Countywide Transportation Plan calls

for the relocation of this road approximately 1 mile further west as well as widening to six lanes. A third major collector road, Lenah Connector Road, is proposed for construction approximately 1 ½ miles further west of Route 659 to connect Route 621 to the Prince William County line.

Two major collector roads parallel to Route 50 are planned for the study area. They are proposed to be located approximately ½ mile north and south of Route 50 and connect Loudoun County Parkway to Route 659. The southern collector (Tall Cedars Parkway) is partially constructed in the vicinity of South Riding. The Route 50 Task Force recommends that the Board of Supervisors initiate a Comprehensive Plan Amendment to incorporate changes to the Countywide Transportation Plan with respect to the northern collector road location. It is recommended that the road be located south of the currently approved alignment in order to preserve as much land as possible, avoid the bifurcation of the Village of Arcola, and provide pedestrian connectivity to the uses and amenities proposed for the Arcola Center area.

Utilities

Two broadcast antenna/transmission towers are located within two miles of the Route 50 corridor. Public sewer and water services are available to a limited degree in the study area. Sewer and water lines serve the existing South Riding community as well as offer service to future development in the Route 50 frontage in Segment 2. New development in Segments 3 and 4 will require extension of these utilities.

Development Considerations and Constraints

The Washington Dulles International Airport noise contours will have an impact on development in Segments 1, 3, and 4. As stipulated in the Loudoun County Revised Comprehensive Plan and Zoning Ordinance, areas within the LDN 65 noise contour cannot engage in residential development. Although portions of Segment 1 covered by the LDN 65 contour are reserved for quarry activity and thus not impacted, a significant portion of Segment 3 is covered by the LDN 65 as well. The rest of Segment 3 is covered by the LDN 60 contour, and public notification of airport impacts on a residential community is required for areas within one mile of the LDN 60 noise contour. Portions of Segments 1 and 4 are also covered by the LDN 60 contour.

For areas between the Ldn 60-65 aircraft noise contour, the County requires full disclosure statements, acoustical treatments, and avigation easements for residential development. The developer applicant must disclose in writing to all prospective purchasers that they are located within an area that will be impacted by aircraft overflights and aircraft noise. This disclosure must be included in all materials related to the development, including but not limited to sales contracts, brochures, and promotional documents. The applicant must also incorporate acoustical treatment into all dwelling units to ensure that interior noise levels within living spaces do not exceed a sound level of 45 db. In conjunction with the approval of a rezoning application, the applicant should also proffer the dedication of avigation easements to the Metropolitan Washington Airports Authority, indicating the right of flights to pass over the property.

Other development considerations include the existence of green infrastructure elements. Quarry activity in Segment 1 may have an impact on the construction of a new north collector road parallel to Route 50.

Development History and Prior Planning Efforts

The Route 50 corridor is one of the last areas in eastern Loudoun County to experience development pressure. The area is not completely served by central utilities, and given its proximity to Washington Dulles International Airport, it has traditionally been designated as a zone for industrial uses. As the other communities in eastern Loudoun County, including Sterling and Potomac, began to experience

rapid growth in the early 1990s, the County and potential developers began to look to Route 50 as a new outlet for residential development. In response, the 1991 General Plan incorporated the Dulles South community into the rest of Eastern Loudoun County as a new Urban Growth Area.

In 1993, the Dulles South Area Management Plan was produced "to provide a template for new growth if and when the market supports it." Through an extensive community input process the following goals were identified:

- Dulles South will promote an affordable lifestyle for residents through compact community designs
- An efficient and safe network of arterial and collector roads will serve Dulles South
- Important open space, historic and environmental resources will be protected
- Local businesses will employ a variety of residents
- Appropriate public facilities and utilities will be available

The Plan supported the development of Route 50 as a gateway corridor with a mix of residential, commercial, light industrial and office uses. The Plan called for uses to be well buffered from Route 50 and present a pleasing appearance as well as minimal interference with traffic flow.

The 2001 *Revised General Plan* maintains the same planning approach adopted in 1991 with the goal of continuing to direct urban growth to the eastern part of the County. The County committed to maintaining distinct Suburban, Transition, Rural, and Town Policy Areas in which distinct development patterns are pursued. Ashburn, Dulles, Potomac, and Sterling were designated as the four communities in the Suburban Policy Area. The Dulles South Plan was superseded by the Revised General Plan policies for the Dulles Community and sub-areas of the Transition Policy Area.

As the principal arterial road in the Dulles community, the Route 50 corridor has become the focal point for new development in the southeast corner of the County. The County may permit residential zonings at densities up to four dwelling units per acre in areas planned for residential land uses. This is four and twelve times as dense as the maximum allowable density in the Upper Foley and Upper Broad Run Transitional Policy Subareas in which no more than one dwelling unit per one acre or one dwelling unit per three acres is permitted based on current zoning.

Residential Development

The southern frontage of Route 50 in Segments 1 and 2 are adjacent to the northern edge of the South Riding and South Riding Station neighborhoods, a new residential community approved for 2,689 single family detached, 2,546 single family attached, and 1,100 multifamily homes, and a "service-area based" "neighborhood" retail center called South Riding Town Center – Peacock Market Square. This center includes a Food Lion grocery store, a bank, and a video store. The Pleasant Valley United Methodist Church, a historic landmark, is located on the south side of Route 50, as well as several scattered industrial uses.

Construction began in the South Riding community in the mid 1990s. As of the end of December 2005, 1,100 multi family homes, 2,415 single family detached homes, 2,200 single family attached homes, 194,500 square feet of retail, 1,180,000 square feet of office space, and 36,500 square feet of industrial development had been approved for this development.

The Stone Ridge development is located south of Segment 4. As of the end of December 2005, 853 single family detached homes, 1,252 single family attached homes, 1,160 multifamily homes, 269,800 square feet of office space, 316,378 square feet of retail space, and 570,250 square feet of industrial space were

approved. Construction began in the Stone Ridge development located primarily in Segment 4 in the early 2000s.

Ridings at Blue Springs is an existing residential neighborhood located within Segment 1. It was approved for 239 single family detached homes.

Avonlea represents another residential development proposed for construction in the near future. Located in Segment 2 adjacent to the northern edge of the South Riding community, Avonlea, which was approved as Pinebrook Village, is planned as a neighborhood of 343 single family attached homes and 65 single family detached homes.

Townes of East Gate and East Gate are also approved for development in the near future. They are approved for 193 single family attached and 428 multi family units. This new development is also approved for 140,828 square feet of retail and 62,100 square feet of office space.

In addition to the residential development in the Suburban Policy Area, the adjacent Upper Foley and Upper Broad Run Transitional Policy Areas have also experienced development pressure. The Board of Supervisors initiated a Comprehensive Plan Amendment in 2005 to increase the maximum density in the 2,838 acre Upper Foley to 3 dwelling units per acre and in the 6,383 Upper Broad Run to 4 dwelling units per acre with a total build out potential of 27,977 dwelling units.

Growth of Retail Demand

The rapid growth of the area surrounding the Route 50 corridor created a demand for retail development along the corridor and began to attract retail developers. In 1997, the *Countywide Retail Policy Plan Amendment* was formulated detailing the County's policies regarding retail development throughout the County. The *Countywide Retail Policy Plan Amendment* provides the definitive terminology used by the County to label different types of retail development. Retail development is classified as either service area based (which includes centers serving residential and employment areas), or corridor based.

Service area-based retail is designed and scaled for a specific primary market population of no more than 8,000 households or a limited number of employees working in a specific office or industrial park to provide convenience goods, such as groceries, dry cleaning, and video rental. This type of retail is located either internal to residential neighborhoods or office/industrial parks or, in the case of larger centers, on the edge of residential neighborhoods with arterial road visibility. Service area-based retail centers may be "neighborhood convenience" providing convenience goods and services for as few as 500 households, or they may be "community" centers – between 100,000 and 400,000 square feet and serving as many as 8,000 households. They may also be employment supportive retail developments, which serve convenience retail and personal service needs of employees in adjacent business or industrial parks/areas. The square footage depends on total non-residential square footage.

Corridor based retail is designed and scaled to provide a regional market of as many as 30,000 households with shopper goods, such as apparel, household furnishings, and sporting goods and hobby merchandise. These centers may be as large as 1.5 million square feet. External to residential neighborhoods, they are automobile-oriented and require a supporting road network that can accommodate high traffic volumes. Corridor based retail includes "destination retail", the largest scale center offering the widest variety of shoppers goods; "free standing retail", isolated large format stores exceeding 50,000 square feet; and "flex retail", establishments with retail sales as accessory to dominant income producing manufacturing activities.

A “hybrid” retail type, corridor retail, was established for the Route 50 corridor that would allow for convenience and routine shopping needs, generally defined as service-based retail, and also that provide some comparative and specialty goods, generally found in Destination Retail centers. The area of the corridor designated for Corridor Retail uses extends east from the planned west spine road to the Route 606 intersection, and between the planned north and south parallel collector roads as located in the Countywide Transportation Plan.

The plan allows up to 2,000,000 square feet of Corridor Retail uses to be developed on the corridor evenly split between the north and south sides of Route 50. The plan stipulates that these corridor retail centers must front on the collector roads parallel to Route 50 and should be between 250,000 and 450,000 square feet. The Plan also allows for the development of a single corridor retail center consisting of up to one million square feet.

The *Countywide Retail Policy Plan Amendment* policies for Route 50 provided for large scale retail development within the corridor. As a result, developers began to present their retail development proposals to the County. Re-zonings to allow the development of one million square feet of retail, hotel and office uses at Arcola Center were approved in 2000. This project will be located in the northwest corner of Segment 3. At the time of its application it was described as a “power/entertainment center including 811,500 square feet that would include both small and big box retailers as well as a 200-room hotel. An active application for Arcola Center includes 1,620,000 square feet of office space, 1,100,000 square feet of retail, and 550,000 square feet of industrial space.

Opposite the Arcola Center project on the south side of Route 50 in Segment 2 is the proposed Avonlea Plaza, a 300,000 square feet Corridor Retail development. This development has been proposed to serve as the commercial component of the planned development of Avonlea.

Also proposed for Segment 3 is Dulles Landing, a 800,000 square feet retail development. This project is proposed to front on Route 50 and has been described as a “power/community center retail which will likely include several big-box anchors.”

The quantity of retail development proposed (Arcola Center, Avonlea Plaza, and Dulles Landing) and approved (South Riding) for the Route 50 corridor between Loudoun County Parkway and Route 659 exceeds the 2,000,000 square feet maximum set forth in the *Countywide Retail Policy Plan Amendment* by more than 400,000 square feet. The projects north of Route 50 (Arcola Center, Dulles Landing) exceed the 1,000,000 square feet maximum designated for the north side by more than 700,000 square feet.

Recent Planning Efforts

The growth of residential communities, the potential for new employment centers, and intense retail development pressure on the Route 50 frontage has caused the County to re-evaluate its land use plans for the Route 50 corridor. The Board of Supervisors appointed a task force to study the Route 50 corridor and make recommendations regarding desired uses and design. Key taskforce recommendations included increasing retail development of a high quality, visually appealing character along and adjacent to the six and half mile length of the corridor between the county line and Lenah Farm Lane and introducing a new mixed used zoning district to facilitate the desired development and design.

In response to the final report recommendations, the Loudoun County Board of Supervisors has initiated an amendment to the County’s Comprehensive Plan to include land use policies that allow for implementation of the task force’s recommendations.

Project Goals and Objectives

In preparation for the Comprehensive Plan amendment, the Loudoun County Department of Planning engaged BBP Associates, Inc. to evaluate existing retail and options for additional retail development in the Route 50 corridor study area. The objectives of this project were to conduct a retail sector market analysis of the Route 50 corridor between the Fairfax County line and Lenah Farm Lane so as to provide input in order to make recommendations regarding the follow issues:

- The kinds of retail uses sustainable for the study area based on projected demand;
- The phasing of this retail development over time;
- The impact of future retail development on existing retail in the study area and county wide;
- The viability of specific retail configurations and locations; and
- The study area's market position relative to industry thresholds for specific retail configurations and scales.

Glossary of Retail Types

The market analysis conducted for this study is focused on an analysis of the supply and demand of convenience goods, which are found in Loudoun County's service area-based retail establishments, and the supply and demand of shoppers goods, which are found in corridor based retail establishments. This analysis of supply of and demand for convenience and shoppers goods will form a basis for providing input as to the types of retail configurations appropriate to meet the anticipated future demand for shoppers and convenience goods.

The evaluation of existing retail and the formulation of planning options for future retail development on the Route 50 corridor based on the market analysis must be framed within the context of a specific retail configuration classification system. Retail development has been and will remain quite dynamic. In the approximately 10 years since the *Countywide Retail Policy Plan Amendment* was adopted, various types of retail configurations have modified their characteristics, mix and service orientations. Similarly, new types of retail configurations, such as life style centers, have been developed. As the retail industry as a whole has matured and evolved as well as the retail needs of Loudoun County, additional retail categories have been created to accommodate new shopping center formats.

The existing Loudoun County retail classification system has been synthesized with the new categories created to accommodate new retail configurations. This retail classification system is defined below and also detailed in Figure 2.

Mall

Regional Centers feature a large selection of shoppers goods, in a typically enclosed setting between 400,000 and 800,000 square feet. These centers are anchored by at least two general merchandise tenants, such as full line department stores. They serve a primary trade area between 5 and 15 miles and are located on major transportation corridors.

Super Regional Centers feature a large selection of shoppers goods, in a typically enclosed setting larger than 800,000 square feet. These centers are anchored by at least three general merchandise tenants, such as full line department stores. They serve a primary trade area between 5 and 25 miles and are located on major transportation corridors.

Open-Air

Neighborhood Convenience Centers feature a limited selection of convenience goods, in a typically open-air setting smaller than 30,000 square feet. These centers are not usually anchored by a primary tenant but rather are occupied by small scale convenience uses such as gas stations, minimarkets, and banks. They serve a primary trade area of up to 3 miles and are located within predominantly residential areas with access from secondary roads.

Employment Supportive Centers feature a limited selection of convenience goods, in a typically open-air setting smaller than 30,000 square feet. These centers are not usually anchored by a primary tenant but rather are occupied by small scale convenience uses such as gas stations, minimarkets, and banks. The primary trade area is an adjacent or surrounding business or office park. They are located within a business or industrial setting with access from secondary roads.

Neighborhood Centers feature a limited selection of convenience goods in a typically open-air setting between 30,000 and 150,000 square feet. These centers are usually anchored by a grocery store and are occupied by a variety (6 to 15) of convenience goods retail tenants. They serve a primary trade area of 3 miles and are located within predominantly residential areas with access from secondary roads.

Community Centers feature a large selection of convenience goods and a comparative selection of shoppers goods in a typically open-air setting between 100,000 and 350,000 square feet. These centers are usually anchored by two or more large scale shoppers goods establishments and a grocery store. They may include a large variety (more than 15) of small scale convenience goods and shoppers goods retail tenants and/or several additional large scale shoppers goods tenants. They serve a primary trade area between 3 and 6 miles and are located outside of predominantly residential areas with access off major collector or arterial roads.

Freestanding retail features a single (up to 50,000 sq. ft.) shoppers goods establishment. They serve a primary trade area between 3 and 5 miles and are located outside of predominantly residential areas with access of off major collector or arterial roads.

Flex Retail Establishments provide accessory retail products (by a single use tenant) of products that are being manufactured, warehoused, distributed, and/or wholesaled on-site.

Lifestyle Centers feature a variety of upscale shoppers goods, dining, and entertainment activities in an open-air setting between 150,000 and 500,000 square feet. These complexes are not usually anchored in the traditional sense but may include large book stores, other large-format specialty retailers, a multi-plex cinema, and/or a small department store. They serve a primary trade area between 8 and 12 miles and are located outside of predominantly residential areas with access off major collector or arterial roads.

Power Centers feature a large selection of shoppers goods in a typically open-air setting between 250,000 and 600,000 square feet. These centers are usually anchored by three or more large scale shoppers goods establishments and provide a variety of other large scale, “category killer” shoppers goods retailers. They serve a primary trade area between 5 and 10 miles and are located outside of predominantly residential areas with access off major collector or arterial roads.

Theme/festival Centers feature a variety of upscale shoppers goods, dining, and entertainment activities in a unique, often open-air setting between 80,000 and 250,000 square feet. These complexes are not usually anchored in the traditional sense but rather include a variety of dining and entertainment options. They serve the tourist and leisure market which does not belong to any specific geographic market. They are located outside of predominantly residential areas with access off major collector or arterial roads.

Outlet Centers feature a large variety of shoppers goods in typically open air setting between 50,000 and 400,000 square feet. These complexes are not usually anchored in the traditional sense but rather include a variety of manufacturer outlet store types. They serve a primary trade area between 25 and 75 miles and are located outside of predominantly residential areas with access off major collector or arterial roads.

The retail market analysis presented in the following section contains projections for total supportable convenience goods square footage and total supportable shoppers goods square footage in five year increments between 2005 and 2030. These projections of total supportable square feet are based on current sales per square feet that retailers require to locate in a given center. These rates are found in Table 12 in the Appendix.

Although the retail industry is dynamic and new configurations will emerge over time, the projections of total supportable square feet can be translated into the configurations defined above. As a result, the projections may be used to anticipate the types of configurations developers will be likely to propose.

Figure 2: Route 50 Corridor Retail Classification System

Type of Shopping Center	Concept	SF (With Anchors)	Acreage	Typical Anchor(s)		Anchor Ratio*	Primary Trade Area**
				Number	**Type**		
MALLS							
Regional Center	Shoppers Goods General merchandise; fashion (mall, typically enclosed)	400,000–800,000	40–100	2 or more	Full-line department store; jr. department store; mass merchant; discount department store; fashion apparel	50–70%	5–15 miles
Super regional Center	Shoppers Goods Similar to regional center but has more variety and assortment	800,000+	60–120	3 or more	Full-line department store; jr. department store; mass merchant; fashion apparel	50–70%	5–25 miles
OPEN-AIR CENTERS							
Neighborhood Convenience Center	Convenience Goods	Up to 30,000	Up to 3	0	Not usually anchored by single primary tenant; typical uses are minimarket, gas station, bank	N/A	Up t o 3 miles
Employment Supportive	Convenience Goods	Up to 30,000	Up to 3	0	Not usually anchored by single primary tenant; typical uses are fast food, minimarket, gas station, bank	N/A	Adjacent Business/ Office Park
Neighborhood Center	Convenience Goods	30,000–150,000	3–15	1 or more	Supermarket	30–50%	3 miles
Community Center	Convenience and Shoppers Goods	100,000–350,000	10–40	2 or more	Discount department store; supermarket; drug; home improvement; large specialty/ discount apparel	40–60%	3–6 miles
Free Standing	Shoppers Goods	Up to 50,000	4-6	N/A	Single Tenant located on separate parcel and not part of a shopping center	N/A	3-5 miles
Lifestyle Center	Shoppers Goods Upscale national chain specialty stores; dining and entertainment in outdoor setting.	Typically 150,000-500,000	10-40	0-2	Not usually anchored in the traditional sense but may include book store; other large-format specialty retailers; multi-plex cinema; small department store.	0-50%	8-12 miles
Power Center	Shoppers Goods Category-dominant anchors; few small tenants	250,000–600,000	25–80	3 or more	Category killer; home improvement; discount department store; warehouse club; off-price	75–90%	5–10 miles
Theme/Festival Center	Shoppers Goods Leisure; tourist-orient-ed;	80,000–250,000	5–20	N/A	Restaurants; entertainment	N/A	N/A

	retail and service						
Outlet Center	Shoppers Goods Manufacturers' outlet stores	50,000–400,000	10–50	N/A	Manufacturers' outlet stores	N/A	25–75 miles
Flex	Accessory sales to Wholesale, warehouse goods, manufacturing	N/A	N/A	N/A	N/A	N/A	N/A

- * The share of a center's total square footage that is attributable to its anchors
- ** The area from which 60-80% of the center's sales originate.

Source: BBP Associates, Inc., International Council of Shopping Centers, 2004.

RETAIL MARKET ANALYSIS

Definitions

The retail market analysis includes an identification of primary and secondary market areas, household and income growth scenarios, and specific retail categories.

Market Areas

The primary market area is defined as the area from which residents can be expected to make the preponderance of their retail purchases in the study area. The primary market area is comprised of the study area and all residential developments between Route 50 and Braddock Road.

The secondary market area is defined as the area from which the preponderance of retail sales made in the study area that are not derived from residents of the primary market area. The secondary market area includes the Upper Broad Run and Upper Foley subareas as well as the remainder of the Dulles South Planning Subarea not included in the primary market area.

The identification of market areas was predicated on the assumption that the Route 50 Corridor is a subregional destination. It is not envisioned as a target development area for regional shopping opportunities. The majority of sales are made to primary and secondary market area residents. The preponderance of sales not made to residents of the primary market area are made to residents of the secondary market area, with relatively limited sales (10 percent) made to persons outside the primary and secondary market areas.

Retail Categories

The retail categories analyzed in the study are defined below. Table 5 in the Appendix provides additional information on corresponding NAICS codes for the retail categories.

Shoppers Goods includes retail stores classified as general merchandise, apparel, furniture and home furnishings, building materials, electronics, appliance, sporting goods, hobby, book, music, and miscellaneous store types.

Convenience Goods includes grocery, restaurant, health and personal care, and personal and laundry service store types.

The analysis is focused on "traditional" retail goods (shoppers and convenience goods).

The implications of this focus are that demand for and supply of certain other retail goods as well as other land uses typically found on commercial corridors are consequently not included in the estimate of supportable square feet. These categories have not been considered:

Automotive	(ie. car dealerships, tire, battery, and automotive stores, gas stations[1])
Entertainment	(i.e. bowling alleys, movie theaters, video arcades)
Storefront Offices	(i.e. insurance, real estate agents, financial planners, doctors' offices)
Lodging	(hotels)

1 Gas stations are considered a tenant typically found in neighborhood convenience and employment supportive centers. However, this retail use was not analyzed. This type of square footage would be additive to current projections of supportable square footage.

Given the likely demand for uses such as entertainment, doctor's offices, financial services and scarcity of these uses on the corridor, it is expected that their development on the corridor would be supported by the study area. This development potential represents additional square footage not included in the analysis of supportable "traditional" retail space detailed in the sections to follow.

Methodology and Key Assumptions

Following an identification of primary and secondary market areas, household and income growth scenarios, and specific retail categories, residential growth was projected for each scenario in five year increments. The growth projections were then used to estimate retail expenditure, and capture rates were applied to the estimated retail expenditure to determine retail sales potential in the study area. Total supportable sales (by 5-year period) were then divided by appropriate sales per square foot factors to determine the supportable square footage of retail space.

Residential Growth Projections

The retail market analysis for the Route 50 Corridor Study is based on the existing and projected dwelling unit supply for the primary and secondary market areas. Total dwelling units (DU's) are calculated for each of the four scenarios. Each scenario is based upon a different set of build-out assumptions provided by the Loudoun County Planning Department (Figure 3).

Figure 3: Retail Market Analysis Growth Scenarios

Scenario	Code	Description
Base Case	A	Base Case scenario assumes a potential build-out of the Upper Foley and Upper Broad Run subareas of 4,571 DU's based on current land use regulations
Alternative Case	B	Alternative scenario assumes a potential build-out of 27,977 DU's in the Upper Foley and Upper Broad Run subareas, a 23,406 DU increase over the base case scenario.
Current Build-Out	1	Current Build-Out Scenario is based on Loudoun County Planning Department projections of study area build-out total dwelling units for 2030. This scenario is based on a total year 2030 DU build-out of 3,818.
Route 50 Task Force Build-Out	2	Route 50 Task Force Build-Out Scenario utilizes a higher Loudoun County Planning Department projection of study area build-out total dwelling units for 2030. This scenario assumes a project study area total 2030 DU's of 7,708.

Scenario A1 =	Base Case + Current Build-Out
Scenario A2 =	Base Case + Higher Planning Department Build-Out Estimates
Scenario B1 =	Alternative Case + Current Build-Out
Scenario B2 =	Alternative Case + Higher Planning Department Build-Out Estimates

It is assumed that these build-out totals are achieved during the analysis time-frame (a 2030 build-out is assumed for the study area and a 2025 build-out is assumed for the Upper Broad Run and Upper Foley subareas). The analysis was conducted for each assumption. Figure 4 details the dwelling unit projections.

Figure 4: Dwelling Unit Projections
Primary and Secondary Market Areas

Scenario	2005	2010	2015	2020	2025	2030
A1	8,382	15,220	21,173	25,652	28,180	29,297
A2	8,382	15,998	22,729	27,986	31,291	33,187
B1	8,382	21,172	32,977	43,307	51,586	52,703
B2	8,382	21,950	34,532	45,641	54,697	56,593

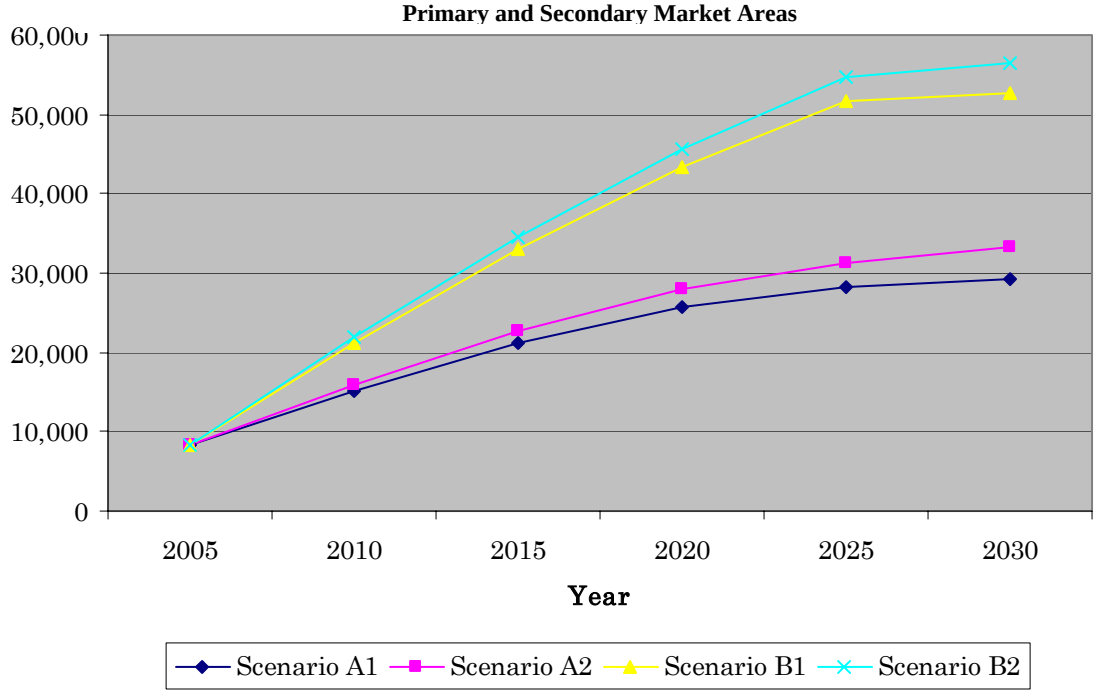
A1: Base Case + Current Build-Out, A2: Base Case + Higher Planning Department Build-Out Estimates, A3: Alternative Case + Current Build-Out, A4: Alternative Case + Higher Planning Department Build-Out Estimates

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

In Scenarios B1 and B2, the number of dwelling units increases rapidly, (by 128 percent every five year increment) between 2005 and 2025. The growth rate is highest (at 153 percent over the five year increment) between 2005 and 2010 in which approximately 12,700 new dwelling units are projected in Scenario B1 and approximately 13,500 new dwelling units are projected in Scenario B2. Growth levels off and increases at a slower pace between 2025 and 2030.

In Scenarios A1 and A2, the number of dwelling units increases at a slower pace than in B1 and B2. The number of dwelling units increases by 60 percent every five year increment between 2005 and 2025. Growth rates are also highest between 2005 and 2010, yet in A1 the rates slow significantly after 2020 as the planning area nears build out. The A2 scenario also projects a slow down after 2020, yet not as drastically as in A1. The A2 scenario still grows at 9 percent during the two five-year increments between 2020 and 2030.

Figure 5: Dwelling Unit Projections
Primary and Secondary Market Areas



Source: BBP Associates, Inc., Loudoun County Planning Department, MWCOG Projections Round 7.0

Households (which equal occupied housing units) are calculated as a function of an assumed 5 percent vacancy factor for dwelling units. Total households are multiplied by projected average household income for each 5-year increment to determine total household income. Average household income is assumed to increase at the historic rate of growth of approximately 15% per 5-year period.

Retail Expenditure and Retail Sales Demand

BBP determined retail expenditure factors to calculate the percentage of total household income that represents selected retail expenditures by retail category. This results in the total ($) value of retail expenditures, by market area, for each retail category.

To determine the retail sales demand, BBP applied a different capture rate, the amount of retail expenditures that a given retail area can be expected to "capture", to the primary and secondary market areas. The capture rate of retail expenditure by residents of the primary market area on shoppers and convenience goods has been set at 30 percent, and 70 percent, respectively. The capture rate for the western part of the secondary market area, Upper Broad Run and Upper Foley, has been set at 20 percent of all household retail expenditures for shoppers goods and 45 percent for convenience goods. The capture rate for the eastern part of the secondary market area, all of the Dulles Planning Area except Upper Broad Run and Upper Foley, has been set at 10 percent of all household retail expenditures for shoppers goods and 20 percent for convenience goods.

The capture rates for the primary and secondary market areas are based on a number of assumptions. To begin, the capture rates for the secondary market area are much lower than for the primary market area because the Route 50 corridor is not considered a regional shopping destination. As a result, purchases by residents of the secondary market area do not generally represent a significant share of the corridor retail establishments' total sales. Furthermore, it is assumed that there will be a balance between supply of and demand for shoppers and convenience goods in the secondary market area. Residents of the secondary market area will only purchase a portion of their retail goods on the Route 50 corridor primary market area because they will be relatively well served by retail uses near to where they live.

If policy decisions are made which limit retail development within Upper Broad Run and Upper Foley, the Route 50 corridor may become a regional shopping destination. The new residents of the Upper Broad Run and Upper Foley areas would have no choice but to make more purchases on the Route 50 corridor than are currently projected. As a result, purchases made by these residents of the secondary market area, would represent a significant share of the retail establishments' total sales. The anticipated growth in the secondary market area, especially the Upper Broad Run and Upper Foley areas, combined with higher capture rates, would significantly increase estimated retail expenditure in the study area/primary market area and thus support more retail space in the study area/primary market area. The current policy provides for minimal retail development in the Upper Broad Run and Upper Foley areas. Based on this policy, retail expenditure in the study area/primary market area may likely support more retail space in the study area/primary market area.

In contrast to the secondary market area, it is assumed that there will be a balance between supply of and demand for shoppers and convenience goods in the primary market area. The demand for retail by residents of the primary market area should be met by the supply of retail goods offered by retail establishments in the primary market area. As a result, retail establishments on the Route 50 corridor should expect that the majority of their retail sales will come from residents of their primary, or local, market area.

The capture rate for the eastern part of the secondary market area is lower than for the western part because the existing shoppers goods retail opportunities in Fairfax County will satisfy a portion of the demand for shoppers goods from new residents in the eastern part of the market area.

Figure 6 details total estimated sales by market source (i.e. primary and secondary market areas).

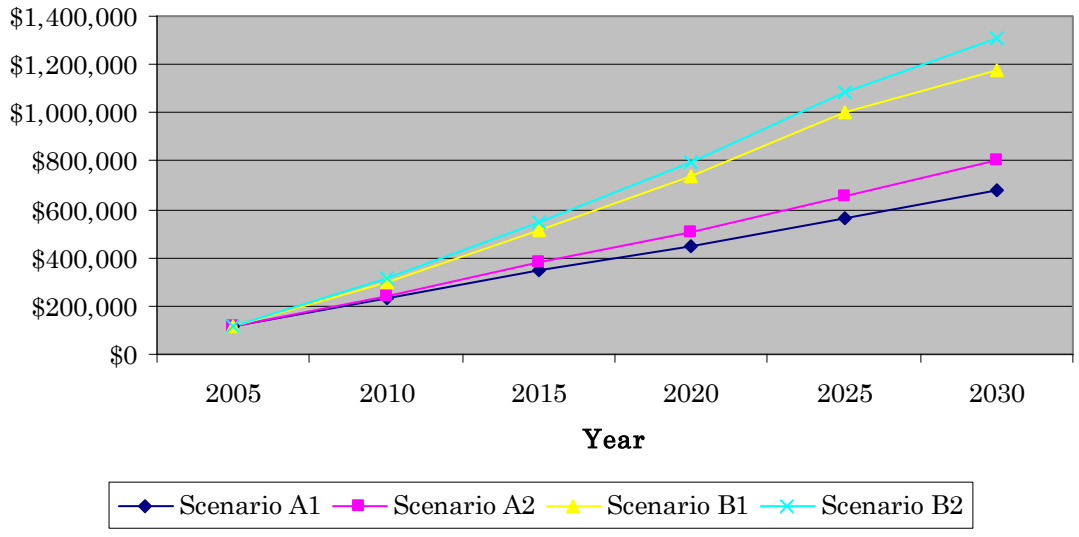
Figure 6: Retail Sales Demand (1,000's)
Study Area Sales of "Shoppers Goods" and "Convenience Goods"

	2005	2010	2015	2020	2025	2030
Scenario A1	$119,444	$228,774	$344,569	$450,748	$564,439	$676,289
Scenario A2	$119,444	$243,421	$378,276	$508,924	$653,691	$804,680
Scenario B1	$119,444	$301,487	$510,491	$736,304	$1,000,021	$1,177,469
Scenario B2	$119,444	$316,134	$544,198	$794,480	$1,089,272	$1,305,860

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

Growth in retail sales demand follows the household growth trends. Growth in retail sales demand in the A1 and A2 scenarios is much flatter than in the B1 and B2 scenarios. By 2015, retail sales demand in the B1 scenario is 48 percent higher than in the A1 scenario, and retail sales demand in the B2 scenario is 44 percent higher than in the A2 scenario. By 2025, these differentials have increased to 77 percent and 67 percent, respectively.

Figure7: Retail Sales Demand (1,000s)
Study Area Sales of "Shoppers Goods" and "Convenience Goods"



Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

The growth in retail sales demand analysis is almost exclusively focused on household consumers. Supportable demand is a function of consumer expenditures by households and excludes business to business purchases. For example, retail expenditures by general contractors on building materials and by small businesses on office supplies is not included as a separate source of demand. It is only accounted for as one part of the share of total retail sales captured from non-residents of the primary and secondary market areas, estimated at 10 percent of total retail sales.

Since the analysis is based on household expenditures, the retail expenditures by businesses and institutions (such as by general contractors on building materials and by small businesses on office supplies) is not estimated. Supportable square feet may be higher when retail expenditure by these sources is included as a separate source of demand.

In addition to retail expenditure by businesses on business-related merchandise, demand for retail goods by office employees is not addressed as a separate demand category. It is only accounted for as one part of the share of total retail sales captured from non-residents of the primary and secondary market areas, estimated at 10 percent of total retail sales.

If the Route 50 corridor receives a great deal of new office development, retail expenditures by these employees may become an important source of retail demand and provide support for additional retail. However, convenience goods retail developments that rely almost exclusively on employee expenditure (such as employment supportive retail internal to office and industrial parks) require a substantial employee population to represent feasible projects. As an illustration, employees who are well served by retail could spend $1,600 per year per employee, and approximately 2,300 employees would be required to support a 20,000 square foot convenience goods retail project.[2]

Supportable Retail Space

To calculate the supportable square feet of retail space, BBP estimated retail productivity levels (sales per square foot factors) by retail category based on current regional factors and an assumed annual rate of increase approximately proportional to the rate of increase in household income. These sales per square foot factors are found in Table 12 in the Appendix. It is assumed that sales volume (productivity) changes will be generally in line with changes in income. Total supportable sales (by 5-year period) were divided by the appropriate factor to determine the supportable square footage of retail space. The results of this analysis are provided in Figure 8. Figure 8 provides the cumulative increases in total supportable square footage for each five year increment. For example, in 2005 in Scenario A1, 445,171 square feet of retail space are supportable. In 2010 in Scenario A1, 710,757 square feet of retail space are supportable. The 2010 supportable square feet is an increase of 265,586 square feet over the 2005 supportable square feet.

Figure 8: Cumulative Increases in Supportable Retail Space (Square Feet)

Supportable "Shoppers Goods" and "Convenience Goods" Retail Space

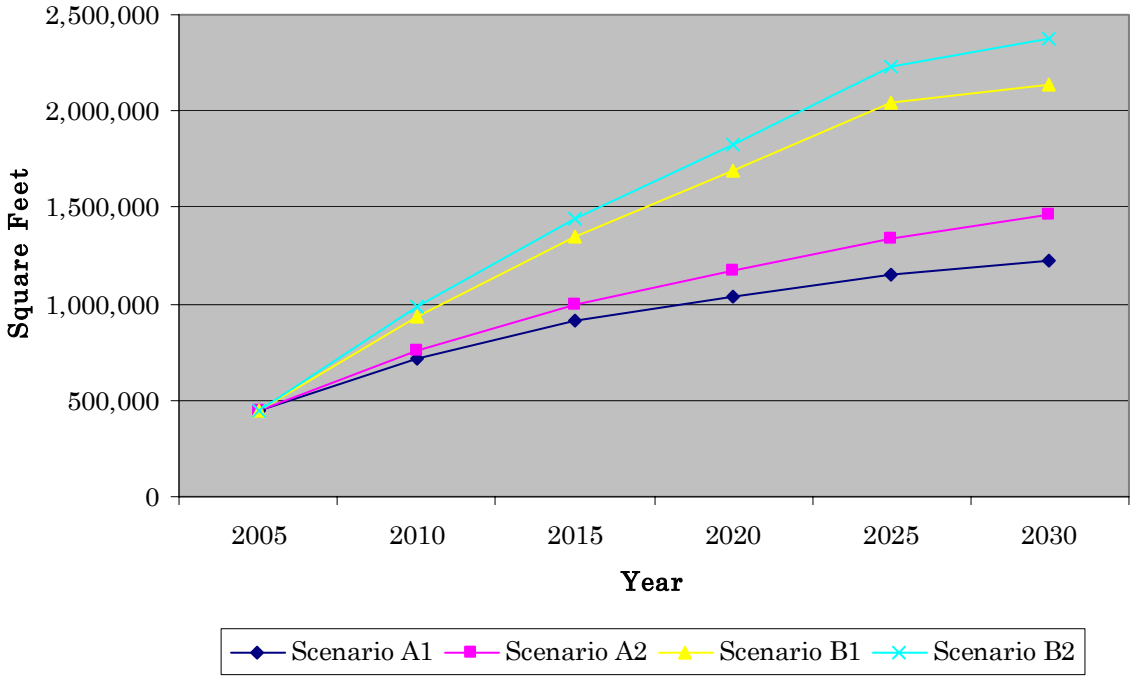
	2005	2010	2015	2020	2025	2030
Scenario A1	445,171	710,757	911,281	1,036,865	1,154,172	1,229,221
Scenario A2	445,171	756,227	1,000,339	1,170,526	1,336,445	1,462,292
Scenario B1	445,171	936,853	1,350,363	1,693,972	2,045,138	2,140,461
Scenario B2	445,171	982,323	1,439,422	1,827,633	2,227,410	2,373,532

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

2 Based on $187.30 per square foot in sales. This is the 2004 national median sales per square foot for open air, non-anchor retail developments adjusted for 2006 inflation. "Lifestyle Centers – What's New in Development and Performance." *ICSC Research Quarterly* V. 10, No. 4. Winter 2003 – 2004.

As a result of the rapid household growth projected to occur between 2005 and 2010, supportable retail space increases between 2005 and 2010 by 59 percent in A1, by 69 percent in A2, and more than doubles in both B1 and B2. In A1 and A2, supportable retail space increases at a relatively steady pace after 2015 (an increase of 13 and 16 percent in A1 and A2, respectively, during the two five year increments between 2015 and 2025). In B1 and B2, supportable retail space continues to increase at a high growth levels until 2025. Increases in the retail space supportable by the primary and secondary market areas is 26 percent in B1 and 27 percent in B2 in the two five-year increments from 2015 to 2025.

Figure 9 Cumulative Increases in Supportable Retail Space (Square Feet)
Supportable "Shoppers Goods" and "Convenience Goods" Retail Space



Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

Supportable square footage of retail space by selected retail category was also determined. In all scenarios during every five-year increment, retail space for convenience goods makes up the largest share of supportable retail space. Within the convenience goods category, new supportable retail space is relatively evenly apportioned between restaurants and other stores, while grocery stores represent the largest share by a small margin. Within the shoppers goods category, GAF (general merchandise, apparel, furniture and home furnishings) comprises the largest share of supportable retail space. This is followed by building materials, and then "Other" goods, which includes electronics, appliance, sporting goods, hobby, book, music, and miscellaneous store types.

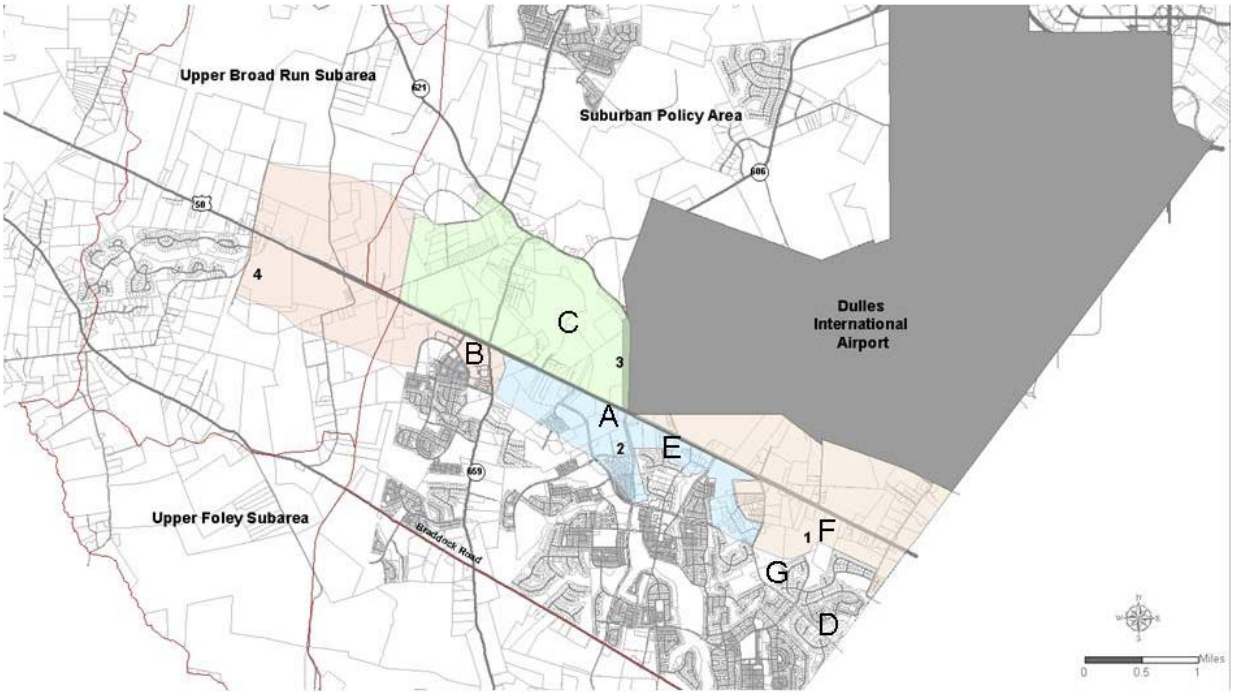
Figure 10: New Supportable Retail Space (Sq. Ft.) By Retail Category

Base Case - Current Build-Out Scenarios (A1)						
	2005	2005 to 2010	2010 to 2015	2015 to 2020	2020 to 2025	2025 to 2030
Shoppers Goods	**130,405**	**78,834**	**60,032**	**38,373**	**35,020**	**22,241**
GAF	46,881	28,341	21,582	13,795	12,590	7,996
Building Materials	45,719	27,639	21,047	13,453	12,278	7,798
Other	37,805	22,854	17,403	11,124	10,152	6,448
Convenience Goods	**314,766**	**186,752**	**140,492**	**87,212**	**82,287**	**52,808**
Grocery	110,850	65,768	49,477	30,713	28,979	18,597
Restaurants	105,176	62,401	46,944	29,141	27,495	17,645
Other	98,740	58,583	44,071	27,358	25,813	16,565
TOTAL SUPPORTABLE	**445,171**	**265,586**	**200,524**	**125,585**	**117,307**	**75,049**
Base Case - Route 50 Task Force Build-Out Scenarios (B1)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**92,059**	**72,710**	**51,346**	**49,159**	**37,016**
GAF	46,881	33,096	26,139	18,459	17,673	13,307
Building Materials	45,719	32,275	25,492	18,001	17,235	12,978
Other	37,805	26,688	21,079	14,885	14,251	10,731
Convenience Goods	**314,766**	**218,996**	**171,403**	**118,842**	**116,759**	**88,831**
Grocery	110,850	77,123	60,362	41,852	41,119	31,283
Restaurants	105,176	73,176	57,273	39,710	39,014	29,682
Other	98,740	68,698	53,768	37,280	36,627	27,865
TOTAL SUPPORTABLE	**445,171**	**311,056**	**244,112**	**170,187**	**165,919**	**125,847**
Alternative Case - Current Build-Out Scenarios (A2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**146,305**	**123,590**	**103,434**	**104,807**	**28,292**
GAF	46,881	52,597	44,431	37,185	37,679	10,171
Building Materials	45,719	51,294	43,330	36,263	36,745	9,919
Other	37,805	42,414	35,829	29,986	30,384	8,202
Convenience Goods	**314,766**	**345,377**	**289,920**	**240,174**	**246,359**	**67,032**
Grocery	110,850	121,630	102,100	84,581	86,759	23,606
Restaurants	105,176	115,405	96,874	80,252	82,319	22,398
Other	98,740	108,342	90,946	75,341	77,281	21,027
TOTAL SUPPORTABLE	**445,171**	**491,682**	**413,510**	**343,609**	**351,166**	**95,323**
Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**159,530**	**136,268**	**116,407**	**118,946**	**43,067**
GAF	46,881	57,352	48,989	41,849	42,762	15,483
Building Materials	45,719	55,930	47,775	40,812	41,702	15,099
Other	37,805	46,248	39,504	33,747	34,483	12,485
Convenience Goods	**314,766**	**377,622**	**320,831**	**271,804**	**280,831**	**103,055**
Grocery	110,850	132,986	112,986	95,720	98,899	36,292
Restaurants	105,176	126,179	107,203	90,821	93,837	34,435
Other	98,740	118,457	100,642	85,263	88,095	32,328
TOTAL SUPPORTABLE	**445,171**	**537,152**	**457,099**	**388,211**	**399,778**	**146,121**

(1) - Sales per square foot factors calculated as the average sales per square foot for existing retail in the study area.

Supportable retail square footage was compared to the existing, approved, and planned retail development to determine the relationship between the retail supply and demand. Future supply was calculated as all approved retail development in the development pipeline (less all build space associated with each development).

Figure 11: Map of Approved Projects in Route 50 Corridor Study Area



Source: Loudoun County Planning Department

The approved retail development in the pipeline is identified in the map in Figure 11 and in the chart in Figure 12.[3] The built space associated with each development is also identified in Figure 12. It is assumed that the pipeline will be built to its' proffered total.

Figure 12: Study Area Approved and "In Progress" Projects

Project Name	Approved (sq. ft.)	Completed to Date (sq. ft.)
South Riding	494,500	88,547
Stone Ridge	316,378	108,247
Arcola Center at Hutchinson Farm	811,500	0
Gum Spring Village Center	56,000	0
Main Street Project	25,450	0
East Gate II	140,848	0
South Riding Market Square	269,965	105,215
Totals	**2,131,630**	**302,009**

Source: Loudoun County Planning Department, BBP Associates, Inc.

The results of this analysis are provided in Figure 13.

3 See Figure 17 for a key to the letters in the map.

Figure 13: Retail Supply and Demand (Sq. Ft.)
By Scenario

	2005	2010	2015	2020	2025	2030
Scenario A1						
Variance[1]	-107,884	1,153,987	953,463	827,878	710,571	635,522
Ratio (Supply[2][3]/Demand[4])	0.76	2.62	2.05	1.80	1.62	1.52
Scenario A2						
Variance[1]	-107,884	1,108,517	864,404	694,217	528,299	402,452
Ratio (Supply[2][3]/Demand[4])	0.76	2.47	1.86	1.59	1.40	1.28
Scenario B1						
Variance[1]	-107,884	927,891	514,381	170,772	-180,394	-275,718
Ratio (Supply[2][3]/Demand[4])	0.76	1.99	1.38	1.10	0.91	0.87
Scenario B2						
Variance[1]	-107,884	882,421	425,322	37,111	-362,667	-508,788
Ratio (Supply[2][3]/Demand[4])	0.76	1.90	1.30	1.02	0.84	0.79

(1) - Variance represents the difference between supply and demand. Negative values represent demand in excess of supply. Positive values represent supply in excess of demand.

(2) - Supply in 2005 is the actual inventory of retail space (by retail category) provided by Loudoun County Planning Department

(3) - Supply in 2010 and 2030 is existing supply plus approved retail sq. footage.

(4) - Demand is square footage of retail supported by 2005 market area population and 2010 and 2030 market area population estimated by scenario.

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

A comparative analysis of supportable retail space and existing retail space by specific retail category was also conducted for the 2005 current conditions. Existing retail space is detailed in Figure 14.

Figure 14: Route 50 Corridor Study Area Existing Retail Space

Study Area Location	Convenience Goods (sq. ft.)	Shoppers Goods (sq. ft.)
Segment 1	2,547	50,736
Segment 2	96,003	6,208
Segment 3	0	0
Segment 4	86,595	21,652
Secondary*	67,887	5,660
Total	**253,032**	**84,255**

* South Riding Town Center

Source: Loudoun County Planning Department , BBP Associates, Inc.

Figure 15 details the results of the comparison between supportable retail space and existing retail space by specific retail category in 2005.

Figure 15: Supportable Retail Demand and Projected Retail Supply (Sq. Ft.) in 2005
By Retail Category

	Existing [1]	Supportable	Variance	Ratio[5]
Shoppers Goods	**84,255**	**130,405**	**(46,150)**	**0.65**
GAF	20,416	46,881	(26,465)	0.44
Building Materials	42,560	45,719	(3,159)	0.93
Other	21,279	37,805	(16,526)	0.56
Convenience Goods	**253,032**	**314,766**	**(61,734)**	**0.80**
Grocery	171,238	110,850	60,388	1.54
Restaurants	63,030	105,176	(42,146)	0.60
Other	18,764	98,740	(79,976)	0.19
Total	**337,287**	**445,171**	**(107,884)**	**0.76**

Source: BBP Associates, Inc., Loudoun County Planning Department

Retail Market Study Findings

The findings from the comparisons of support for retail space with the approved and completed retail space from 2005 through 2030 are as follows:

1. As of 2005, the Route 50 corridor study area / primary market area is underserved overall in convenience and retail goods. In the primary market area, the demand for convenience goods is estimated at 314,766 SF, the supply is 253,032 SF. The demand for shoppers goods is estimated at 130,405 SF, the supply is 84,255 SF.

2. As of 2005, the Route 50 corridor study area / primary market area is slightly "pre-served" in grocery stores. In the primary market area, the demand for grocery stores is 110,850 SF, the supply is 171,238 SF. Grocery stores tend to enter markets early so as to gain a competitive edge and prevent other chains from entering. Developers tend to facilitate this "pre-serving" in order to ease the marketing of residential units. They use business models that allow them potentially to "under perform" in early years in order to preclude competitors and establish a strong market position. Furthermore, shopping center developers need grocery stores as anchors and will provide incentives to draw them into a deal early on in order to make their retail development more feasible.

3. As of 2005, the Route 50 corridor study area's / primary market area's supply of and demand for building materials is approximately "in balance." The demand for building materials supports approximately 45,719 SF, and the retail demand is being met by 42,560 SF of existing supply (However, these uses are both plant nurseries and do not provide the full range of retail goods that would typically be associated with this category).

4. The approved retail projects for the Route 50 corridor (see Figure 11) provide sufficient supply for shoppers and convenience goods through 2030 in the two scenarios without the alternative land use assumptions. In scenario A1, which uses the current build out scenario numbers and current transition area densities, the households and household income are assumed to support 1,229,221 square feet while the approved (plus existing) retail square feet totals 1,864,744. This creates a variance of 635,522 SF and a supply-demand ratio of 1.52. In this scenario, 64 percent of retail purchases would be made by primary area residents and 26 percent by secondary market area residents in 2030.

In scenario A2, which uses the higher Planning Department build out numbers and base case transition area densities, area households and household income levels are assumed to support 1,462,292 square

feet of retail development while the approved retail square feet is 1,864,744. This creates a variance of 402,452 SF and a supply-demand ratio of 1.28. In this scenario, 68 percent of retail purchases would be made by primary area residents and 22 percent by secondary market area residents in 2030.

5. Increasing the transition area densities provides additional demand to support the approved retail projects. In scenario B1, which uses the current build out scenario numbers and the alternative case Transition Area densities, the households and household income are assumed to support 2,140,461 square feet of retail by 2030 while the approved retail square feet is 1,864,744. This creates a variance of -275,718 SF and a supply-demand ratio of 0.87. In this scenario, 37 percent of retail purchases would be made by primary area residents and 53 percent by secondary market area residents (reflecting the significant incremental growth in the secondary market area).

In scenario B2, which uses the higher Planning Department build out numbers for the Route 50 corridor and Arcola area and the alternative Transition Area densities, the households and household income are assumed to support 2,373,532 square feet by 2030 while the approved retail square feet is 1,864,744. This creates a variance of -508,788 and a supply-demand ratio of 0.79. In this scenario, 42 percent of retail purchases would be made by primary area residents and 48 percent by secondary market area residents (again, reflecting the incremental growth in the secondary market area)

In the alternate land use assumption scenarios, the significant growth in households in the secondary market area will result in a larger share of primary market area sales made to secondary market area residents although the capture rates remain the same as in the two scenarios without the alternate land use assumptions.

The following section identifies opportunities for new retail development. A discussion of the distribution of shoppers and convenience goods in the approved projects as compared to the total supportable square feet is followed by market and land use implications and key issues associated with active retail development applications, the Arcola Center configuration, and recommended planning goals for retail development in the study area.

PLANNING CONSIDERATIONS AND RECOMMENDATIONS

The findings of the retail market analysis highlight specific implications for planning efforts that Loudoun County should consider and produce recommendations for phasing of development, development configurations and placement, and the mix of uses encouraged for retail developments.

Comparison of Supply and Demand

The retail market analysis produced supportable square feet for five year increments between 2005 and 2010. Cumulative supportable square feet by five year increments is detailed in Figure 7, and increases in supportable square feet over time are presented in Figure 16. Supportable square feet is greatest during the 2005 to 2010 increment.[4] This occurs because population growth is projected to be most rapid during this time period.

Figure 16: Retail Development Supportable Between 2005 and 2010 (Sq. Ft.)

Scenario	2005 - 2010	2010 – 2015	2015 – 2020	2020 – 2025	2025 - 2030	Total
A1	373,470	200,524	125,585	117,307	75,049	891,935
A2	418,940	244,112	170,187	165,919	125,847	1,125,005
B1	599,566	413,510	343,609	351,166	95,323	1,803,174
B2	645,036	457,099	388,211	399,778	146,121	2,036,245

Source: Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

The retail market analysis identified 1.5 million square feet of shoppers and convenience goods retail square feet currently approved for construction or "in-progress" as phased shopping center complexes within the study area.[5] These projects are listed in Figure 17 and also provided in Figure 11.

Figure 17: Study Area Approved and "In Progress" Projects

Project Name	Square Feet*	Status	Map Location
South Riding	405,953	In Progress	A
Stone Ridge	208,131	In Progress	B
Arcola Center at Hutchinson Farm	811,500	Approved	C
Gum Spring Village Center	56,000	In Progress	D
Main Street Project	25,450	In Progress	E
East Gate II	140,848	Approved	F
South Riding Market Square	164,751	In Progress	G
Total	**1,829,622**		

Source: Loudoun County Planning Department, BBP Associates, Inc.

* For "In Progress" Projects, represents square footage that has not yet been developed

4 The 2005 – 2010 numbers have been adjusted downward to account for existing retail space.

5 The total approved and "in progress" retail space is reduced by 10% to account for non convenience and shoppers goods located in these centers. The East Gate project is not included, as it was approved after the analysis was conducted.

The total supportable square feet in Scenarios A1 and A2 is less than the retail space currently approved for development. In Scenarios B1 and B2, the retail space currently approved for development will satisfy demand through 2020. The completion of these approved projects will leave 446,000 square feet supportable after 2020 in Scenario B1 and 545,000 square feet supportable after 2020 in Scenario B2.

If these currently approved retail projects are comprised primarily of convenience and shoppers goods retail space, their completion "as proffered" by 2010 will exceed 2010 supportable retail space by more than 1 million square feet in Scenarios A1 and A2, by approximately 925,000 square feet in Scenario B1, and by approximately 882,000 square feet in Scenario B2.

Comparison of Shoppers and Convenience Goods Distribution

To understand the impacts of the approved development projects in the potential land use patterns on the Route 50 corridor, a comparative analysis of the potential supply of and demand for shoppers and convenience goods was conducted.

South Riding Market Square and Stone Ridge are community centers. In South Riding Market Square, there are currently 6,208 square feet of shoppers goods (6 percent of total) and 96,003 square feet of convenience goods (94 percent of total). In Stone Ridge, there are currently 21,652 square feet of shoppers goods (20 percent of total) and 86,595 square feet of convenience goods (80 percent of total). It is assumed that the breakdown of shoppers and convenience goods in these community centers at build out will be similar to the current distribution pattern in Stone Ridge.

South Riding Town Center is a neighborhood center. There are currently 67,887 square feet of convenience goods (92% of total) and 5,660 square feet of shoppers goods (8 percent). It is assumed that the breakdown at build out will be of a similar distribution pattern.

The configuration of the retail space at the Arcola Center has yet to be determined. At the time of its application it was described as a "power/entertainment center including 811,500 square feet that would include both small and big box retailers as well as a 200-room hotel." Although the final distribution of shoppers and convenience goods will depend primarily on the kinds of tenants the developers can secure, the development's location on an arterial road and its description as a "power/entertainment center" indicate that the project will have a predominantly shoppers goods orientation. A new application for the Arcola Center increases the amount of retail space from 811,500 square feet to 1.1 million square feet.

The other approved projects (including Eastgate, Gum Springs Village Center, Main Street project) are assumed to be neighborhood, neighborhood convenience, and community centers with limited shoppers goods and a predominantly convenience goods orientation.

The existing supply plus expected distribution of shoppers and convenience goods in the approved projects reflect a distribution in which 63 percent of the total goods are convenience goods, and 36 percent are shoppers goods. This distribution was compared to the total supportable convenience goods retail space and total supportable shoppers goods retail space. Supportable shoppers goods retail space represents only 30 percent of the total, 25-year demand for retail space. This is 365,000 square feet in Scenario A1; 433,000 square feet in Scenario A2; 636,000 square feet in Scenario B1, and 704,000 square feet in Scenario B2. In summary, the corridor will support far more convenience goods retail space than shoppers goods retail space.

If the Arcola Center project proceeds as currently proposed (as a power center or lifestyle center) in which the majority of the establishments provide shoppers goods (and discounting any additional new retail development) the supply of shoppers goods would exceed the demand for shoppers goods in 2030.

Meanwhile, under this same assumption, there would still be a degree of demand for convenience goods in 2030. In this scenario, the imbalance between the supply of and demand for shoppers goods is much more significant than the imbalance between the supply of and demand for convenience goods. This imbalance would be particularly exacerbated by the active application for the 800,000 square foot Dulles Landing project. The impact of the active applications is further discussed "Key Issues and Recommendations" section.

Market and Land Use Implications

The completion of the approved projects in accordance with the assumptions outlined above have two market implications.

1. Market demand for shoppers goods will be satisfied through 2030 in all scenarios.
2. Market demand for convenience goods will be satisfied through 2030 in Scenarios A1 and A2 and through 2020 in Scenarios B1 and B2.

If household growth occurs as envisioned in Scenarios A1 or A2, the completion of these projects in the short term (within the next 5 to 10 years) may lead to a situation in which the market cannot support additional development until after 2030. Growth as envisioned in Scenarios B1 or B2 may not justify new retail development until after 2020. Developers may be deterred from building in a market without sufficient support for new shoppers or convenience goods retailers.

The potential land use implications of these market realities are as follows:

1. High vacancy levels in completed projects as tenants wait to sign leases until market provides additional support.
2. Limited development of additional neighborhood centers internal to residential communities.
3. Limited development of additional community, lifestyle, and power centers.
4. Limited market support for active retail development applications (1,100,000 square feet of retail space at the Arcola Center, the 300,000 square foot Avonlea Plaza, the 768,000 square foot Dulles Landing, and the 75,348 square foot Pleasant Valley Village).

The first two implications are associated with clear negative consequences. Vacancies make shopping centers less attractive to tenants and pull down the rents that a developer can charge. Lower end tenants are eventually attracted to low rent centers. The end product is a new center with less than desirable tenants. It is also possible that large tracts of land will be cleared and graded yet remain vacant while developers wait for additional market support to build the rest of their shopping centers. This is undesirable from an aesthetic perspective and also prevents the development of projects that are more appropriate for the existing needs of the surrounding community and County at large.

The limited development of additional neighborhood centers is also a negative consequence. The provision of so many convenience goods establishments in the approved projects may lead to market saturation and discourage developers from proposing projects within neighborhoods. Residents of the underserved areas will be forced to travel longer distances to reach retail centers, thus increasing traffic and potentially reducing the appeal of these areas as suburban communities.

The County should consider strategies to avoid these negative consequences. To the extent possible, the County should work with developers to tie retail development more closely to household and income growth when developers submit requests for a modification to their application or request a special use permit. Additional recommendations for encouraging neighborhood centers are provided in the "Key Issues and Recommendations" section.

In contrast to the first two implications in which the consequences are clear cut, potentially limited development of additional shoppers goods destinations may not be a negative situation. It is possible that the development of the shoppers goods retail space proposed for the Route 50 corridor study area will limit the market support for additional shoppers goods retail centers in the study area and discourage their development for at least 15 years.

Approved and active applications seek to concentrate large quantities of shoppers goods retail space in specific places within the study area. While significant infrastructure investments will be required to support large scale shoppers goods retail centers, there are a number of benefits associated with this possibility. The development of large scale retail destinations will concentrate shoppers goods and potentially create the critical mass necessary to attract high-end retailers typically found in lifestyle centers. To the extent that that the County successfully discourages strip development, the rest of the Route 50 frontage could be preserved until market support justifies its development. The number of curb cuts and traffic congestion will be limited to the area surrounding the large scale retail centers.

Key Issues and Recommendations

While the concentration of shoppers goods may be desirable, several questions are raised:

1) How should the active retail development applications be addressed?
2) How should the Arcola Center be configured?
3) How should the Route 50 study area be planned so as to encourage appropriate shoppers and convenience goods retail development and discourage strip mall development?

Active Retail Development Applications

The retail market analysis demonstrates limited market support for the active retail development applications. If these projects are approved and developers move forward with plans to build, the imbalance between the supply of and demand for shoppers and convenience goods retail establishments may be further intensified.

Provision of Market Support

The County should work closely with the developers during the application approval processes to ensure phased development tied to household and income growth. Given the dynamic nature of retail development, developers should be required to submit fresh documentation that there is market support for their projects. Retailers adhere to industry thresholds when considering when to enter a new market, and developers should be required to demonstrate that their projects will meet these thresholds.

The chart in Figure 1 provides a selection of these industry standards. Demographics within the Primary Trade Area represent one of the key factors that retailers consider. As an illustration, a neighborhood center project will be between 30,000 and 150,000 square feet. The developers should be able to demonstrate that the project's desired retail tenants will find sufficient market support in the primary trade area. Typically the majority of their total sales should come from this primary trade area. A clear understanding and explanation of the impact of competition (both existing and in the pipeline) within the primary market area on market demand is also necessary to demonstrate project feasibility.

The sales per square foot (by retail category) factors used in this study can be used as a guide to determine total retail sales required by retail establishments. These can be found in Table 12 of the Appendix.

Introduction of Non-retail Components

In addition to providing market support, developers should be requested to consider strategies to bring more balance to the supply of and demand for retail space. The non-retail components of the active applications should be considered for approval before the retail components. At the Arcola Center, this includes 1,620,000 square feet of office space and 550,000 square feet of industrial space. At Dulles Landing, this includes 22,000 square feet of office space. This office and industrial space development may provide the support necessary for approximately 55,000 square feet of employment supportive retail centers. The new office development will also contribute to the County goal of creating a new employment center on the corridor and produce a significant contribution to the tax base.

Entertainment uses (such as movie theaters and bowling alleys), hotels, and multifamily housing (condominiums and apartments), and auto uses also represent appropriate uses. Hotels and entertainment uses, in particular, will contribute to the creation of a tourist destination. These uses, when combined with multifamily residential development in the study area, will also contribute additional retail demand.

Arcola Center Configuration

Given the limited shoppers goods retail demand, the Arcola Center may represent the study area's prime opportunity to create a high end retail center. While a power center configuration (as proposed in the original Arcola Center application) may bring much needed shoppers goods to the Route 50 market area, the configuration caters to "big box" retailers that do not necessarily engender a high end shopping experience. Power center configurations also limit a developer's ability to phase the completion of a project and respond to changes in market demand.

Rather than a power center configuration, a lifestyle architectural style should be applied. The benefits of a lifestyle configuration for the Arcola Center are numerous. Lifestyle centers:

1. Foster the recruitment of high end tenants.
2. Generate many "quality of life" benefits - including a pedestrian friendly orientation, increased amenities for the surrounding residential and employment population, and the creation of a community gathering location - that a power center cannot provide.
3. Allow for a phased approach to completion with the introduction of retail occurring gradually over time in response to growth in market demand.
4. Allow for the natural integration of non-retail uses - such as multifamily residential, office space, or hotels - for creation of a mixed use activity center.

While the benefits of a lifestyle center are clear, the dominance of "big box" retail is difficult to ignore. These stores provide significant rental income and attract a regional customer base. By capturing such a large share of market demand, they help to ensure the dominance of the retail center in which they are located. They may also prevent the development of scattered or strip mall style shoppers goods retail centers of a lifestyle or Main Street style configuration.

The County and the developers should work together to establish a lifestyle center configuration that allows for an appropriate mix of small format and "big box retailers." The needs of the developer to secure anchor tenants who can commit to a long term lease and significant rental income should be balanced with the need to create a high quality retail center. Figure 18 provides average store sizes for shoppers good retail categories. These average stores sizes may be used as a guide in determining an appropriate configuration.

Figure 18: Average Store Size by Shoppers Goods Retail Category

Retail Category	Average Store Size (Square Feet)
Apparel & Accessories	5,609
General Merchandise	81,442
Home Furnishings (Small Format)	6,397
Furniture and Home Furnishings (Large Format)	35,079
Jewelry Stores	4,400
Sporting Goods	51,942
Book Retailers (Small Format)	4,007
Book Retailers (Large Format)	22,093
Electronics Stores (Small Format)	7,752
Electronics Stores (Large Format)	35,278
Building Supplies	109,500
Novelty and Fabric Stores	15,452
Pet Stores	18,722

Source: BBP Associates, BizStats.Com

Appropriate Retail Land Use Patterns in Study Area

As discussed, additional shoppers goods retail development may be stymied through 2030, yet the benefits of concentrating shoppers goods retail have been identified. The County should pursue actively the concentration of shoppers good retail in a limited quantity of high quality, upscale retail centers in lifestyle center and Main Street style configurations. Non-retail uses, including office space, entertainment uses, auto uses, and multi-family residential development, should be encouraged as additional components of these centers.

Meanwhile, the demand for convenience goods is much higher than the demand for shoppers goods in all scenarios. In Scenarios B1 and B2, there will be demand for additional convenience goods retail establishments after 2020. The demand for convenience goods raises an important concern about appropriate planning for retail development on the rest of the Route 50 frontage and in the study area. Convenience goods should be steered away from arterial and major collector roads and toward neighborhood and neighborhood convenience centers internal to residential communities and to employment supportive centers. The location of convenience goods in residential communities and office parks provides an amenity for suburban neighborhoods and employment centers, fosters a pedestrian friendly environment, and reduces the number of trips out of residential communities and employment centers and onto arterial roads. In addition, by steering these establishments away from arterial road frontage, strip mall development of potentially low quality establishments is discouraged.

There are several challenges associated with these policy goals. Developers are often unwilling to provide neighborhood and neighborhood convenience centers within residential communities. They are costly to build, require expensive buffering and parking, require ongoing maintenance and management, and take up space that would be otherwise developed as housing.

Meanwhile, community centers on prime arterial road frontage are attractive development opportunities. They enjoy excellent access and attract large and often high end grocery stores that provide significant rental income. The problem with community centers is that convenience goods establishments are the dominant tenants. As a result, these community centers take away from the market demand for neighborhood centers internal to residential neighborhoods.

To preserve Route 50 frontage for shoppers goods retail centers and steer convenience goods into residential neighborhoods and employment supportive centers, the County should consider several policies. These policies are:

1. Creation of mixed use business district;
2. Provision of additional incentives to encourage neighborhood centers in residential communities;
3. Reduction of support for community centers and/or encouragement for non-retail uses in community centers to provide partial on-site support for convenience retail goods.

Mixed Use Business District

The County should develop strategies to preserve the Route 50 frontage until the market justifies its development as upscale shoppers goods retail centers with lifestyle and Main Street style configurations. The subdivision of property for small scale strip retail development should be discouraged. Rather, the consolidation of small parcels into larger areas for future redevelopment should be pursued.

The County should proceed with the Route 50 Task Force's recommendation that a mixed use business zoning district be created as an overlay for the Route 50 study area. This overlay zone would provide incentives to property owners who agree to adhere to specific landscaping, signage, building materials, and parking design standards. Incentives would also be offered in exchange for property consolidation. Property owners who submit planned development proposals would be required to provide substantial market support for their concept and work closely with the County to establish an appropriate site plan and mix of uses.

Neighborhood Center Incentives

To encourage the integration of neighborhood and neighborhood convenience centers within residential communities and within office and industrial parks, the County should consider providing incentives to overcome the cost barriers associated with their development. Allowing for increased residential or office space densities may be one strategy to lessen the cost burdens.

Community Center Modifications

The County should encourage the introduction of non-retail uses into community centers. These uses will provide partial support for the convenience goods located in the centers and minimize the impact on the market support for neighborhood and neighborhood convenience centers located internal to residential communities. They also provide for live/work/shop opportunities in one mixed use activity center.

As discussed in terms of the Arcola Center, encouraging office space, entertainment centers, and multifamily housing in the community and lifestyle centers will also allow for the creation of a "lifestyle center" environment and produce the associated quality of life benefits. The Stone Ridge and South Riding community centers have followed this model to an extent by developing limited quantities of low density office space adjacent to the retail shopping center.

The new mixed use zoning category that provides incentives for retail, office, entertainment, lodging, and residential uses within the same development project would facilitate the development of this new style of community center.

IMPACTS OF STUDY AREA RETAIL DEVELOPMENT

Impact on Existing Retail in the Study Area

The retail market analysis has identified demand for a total of 1.2 million square feet in Scenario A1, 1.4 million square feet in Scenario A2, 2.1 million square feet in Scenario B1, and 2.3 million square feet in Scenario B2. Of this supportable retail space, 337,000 square feet already exists. If new retail development occurs at an incremental pace and is tied to the growth of residents and households, there should not be a negative impact on existing retail development.

Impact on County Retail

The impact of new retail development on the County as a whole also depends on the pace at which it is developed. If a significant quantity of new shoppers goods retail is approved and constructed within the next five years, the market will be temporarily over saturated until additional household and income growth occurs. This over saturation may have the consequence of negatively impacting retail sales at other, particularly older, shoppers goods retail destinations in adjacent areas.

An important consideration is that supportable shoppers goods retail space represents only 30 percent of the total, 25-year demand for retail space. Over-saturation of shoppers goods is a much greater risk than over-saturation of convenience goods.

Impact on Transportation Network

One of the assumptions of Scenarios B1 and B2 is that residents of the Upper Broad Run and Upper Foley areas will shop on the Route 50 corridor. The timing of plans to improve the transportation network connecting these areas to the Route 50 corridor should be evaluated.

The transportation network will also be impacted by decisions regarding the distribution of convenience goods retail space between neighborhood centers and community centers. Policies which steer convenience goods retail space into neighborhood centers will impact the road networks internal to residential neighborhoods. Additional County infrastructure investments may be required to support these neighborhood centers.

The concentration and distribution of shoppers goods retail space will also impact the road network. As discussed in the previous section, the near term completion of a major shoppers goods center combined with a mixed use zoning overlay will likely limit shoppers goods retail centers and strip mall retail development on the Route 50 frontage. These land use patterns will minimize the number of curb cuts from Route 50 or the proposed parallel collector road.

Impact on County Employment Statistics and Tax Base

To determine the impact of the potential retail development on county employment, an industry standard based on surveys and comparable development is applied for the number of employees per square foot of retail development.

Figure 19: Industry Standard for # Employees per Store

Store Type	# of Employees Per 1,000 Square Feet
Big Box	2
Grocery	3
Pharmacy	2
Specialty	3
Restaurants	7

Source: BBP Associates, Inc.

By applying these standards to our market analysis projections for supportable retail space by retail categories, we estimate the following new retail employees and contribution to the tax base. Given low retail wages, retail employees' contribution to the tax base in minimal.

Figure 19: New Retail Employees and Gross Wages

Scenario	New Retail Employees	Tax Base Contribution (Gross Wages)
A1	4,200	$1.6 million
A2	5,000	$1.9 million
B1	7,300	$2.8 million
B2	8,100	$3.1 million

Source: BBP Associates, Inc., Loudoun County Planning Department, MWCOG Projections Round 7.0

The impact of the potential commuting patterns of these new employees on the County road network should be considered. If the retail employees are primary household earners (as compared to high school students or secondary wage earners), it is unlikely that they would live in the new residential communities, such as Stone Ridge and South Riding. The retail employee primary household earners will be living elsewhere and commuting to their jobs on the Route 50 corridor. The introduction of multifamily residential units in or in close proximity to the retail centers, as is recommended for the Arcola Center and other new developments fronting on Route 50, may be affordable to these employees and represent a strategy to mitigate the potential impact of additional commutes on the County roads.

Appendix

Table 1: Dwelling Unit Projections - Summary

Route 50 Corridor Study
Primary and Secondary Market Areas
By Scenario
2005, 2010, 2030

	2005	2010	2015	2020	2025	2030
Scenario A1	8,382	15,220	21,173	25,652	28,180	29,297
Scenario A2	8,382	15,998	22,729	27,986	31,291	33,187
Scenario B1	8,382	21,172	32,977	43,307	51,586	52,703
Scenario B2	8,382	21,950	34,532	45,641	54,697	56,593

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

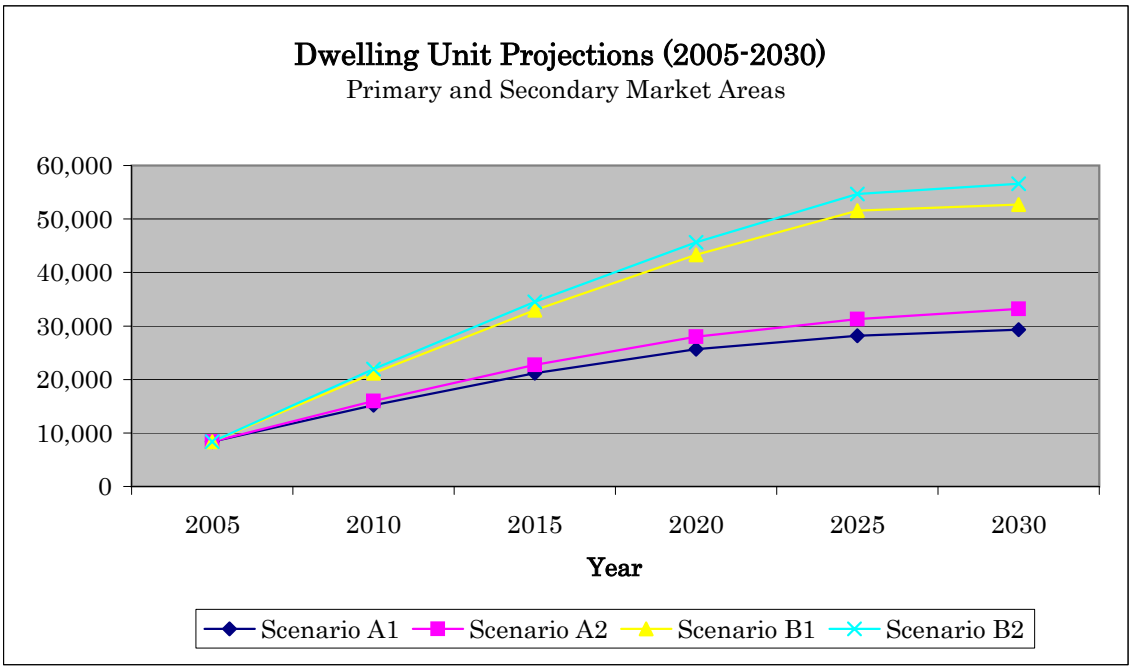


Table 2: Retail Sales Demand (1,000's) - Summary

Route 50 Corridor Study
Study Area Sales of "Shoppers Goods" and "Convenience Goods"
Study Area
By Scenario
2005, 2010, 2030

	2005	2010	2015	2020	2025	2030
Scenario A1	$119,444	$228,774	$344,569	$450,748	$564,439	$676,289
Scenario A2	$119,444	$243,421	$378,276	$508,924	$653,691	$804,680
Scenario B1	$119,444	$301,487	$510,491	$736,304	$1,000,021	$1,177,469
Scenario B2	$119,444	$316,134	$544,198	$794,480	$1,089,272	$1,305,860

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

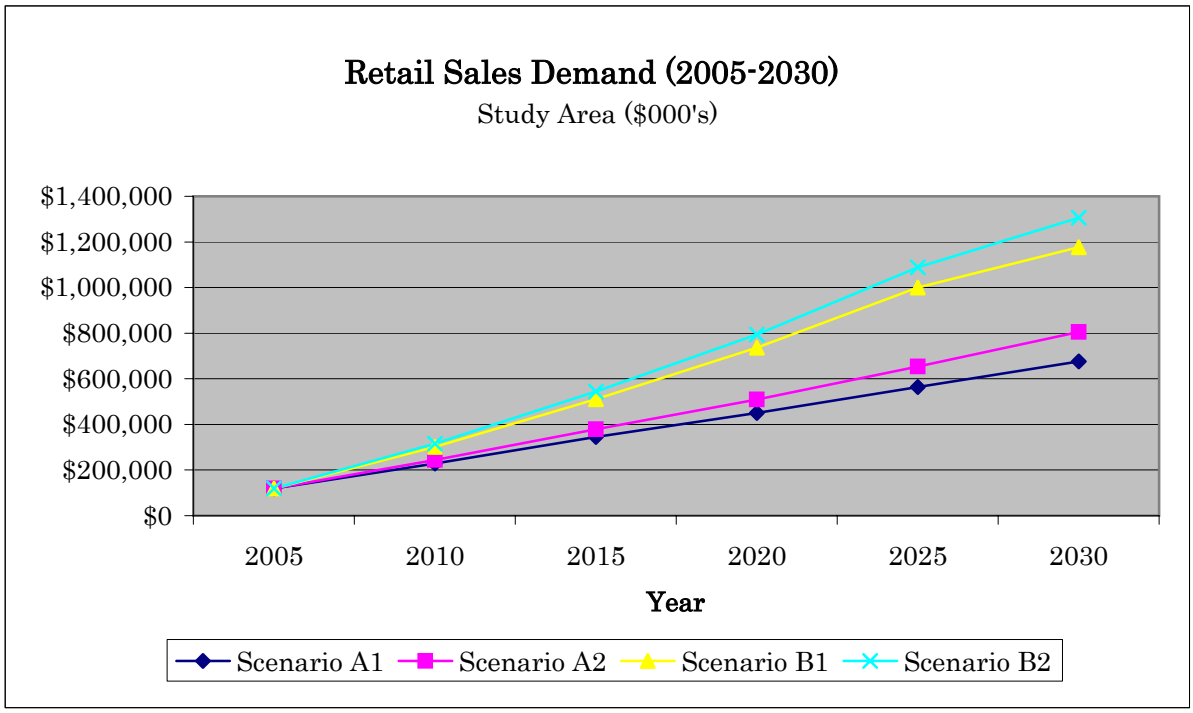


Table 3: Supportable Retail Space (Square Feet) - Summary

Route 50 Corridor Study
Supportable "Shoppers Goods" and "Convenience Goods" Retail Space
By Scenario
2005, 2010, 2030

	2005	2010	2015	2020	2025	2030
Scenario A1	445,171	710,757	911,281	1,036,865	1,154,172	1,229,221
Scenario A2	445,171	756,227	1,000,339	1,170,526	1,336,445	1,462,292
Scenario B1	445,171	936,853	1,350,363	1,693,972	2,045,138	2,140,461
Scenario B2	445,171	982,323	1,439,422	1,827,633	2,227,410	2,373,532

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

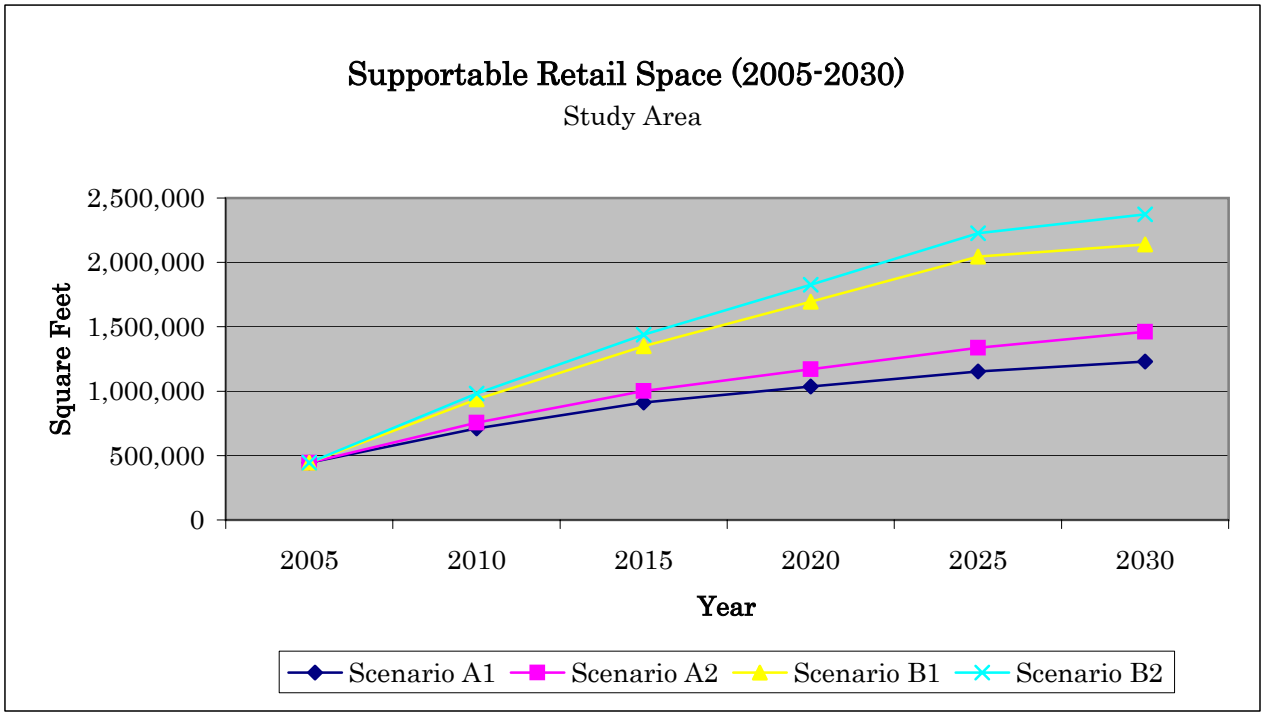


Table 4: Retail Supply and Demand (Sq. Ft.) - Summary

Route 50 Corridor Study
By Scenario
2005, 2010, 2030

	2005	2010	2015	2020	2025	2030
Scenario A1						
Variance[1]	-107,884	1,153,987	953,463	827,878	710,571	635,522
Ratio (Supply[2][3]/Demand[4])	0.76	2.62	2.05	1.80	1.62	1.52
Scenario A2						
Variance[1]	-107,884	1,108,517	864,404	694,217	528,299	402,452
Ratio (Supply[2][3]/Demand[4])	0.76	2.47	1.86	1.59	1.40	1.28
Scenario B1						
Variance[1]	-107,884	927,891	514,381	170,772	-180,394	-275,718
Ratio (Supply[2][3]/Demand[4])	0.76	1.99	1.38	1.10	0.91	0.87
Scenario B2						
Variance[1]	-107,884	882,421	425,322	37,111	-362,667	-508,788
Ratio (Supply[2][3]/Demand[4])	0.76	1.90	1.30	1.02	0.84	0.79

(1) - Variance represents the diferrence between supply and demand. Negative values represent demand in excess of supply. Positive values represent supply in excess of demand.

(2) - Supply in 2005 is the actual inventory of retail space (by retail category) provided by Loudoun County Planning Department

(3) - Supply in 2010 - 2030 is exting supply plus approved retail sq. footage.

(4) - Demand is square footage of retail supported by 2005 market area population and 2010 - 2030 market area population estimated by scenario.

Source: BBP Associates, Loudoun County Planning Department, MWCOG Projections Round 7.0

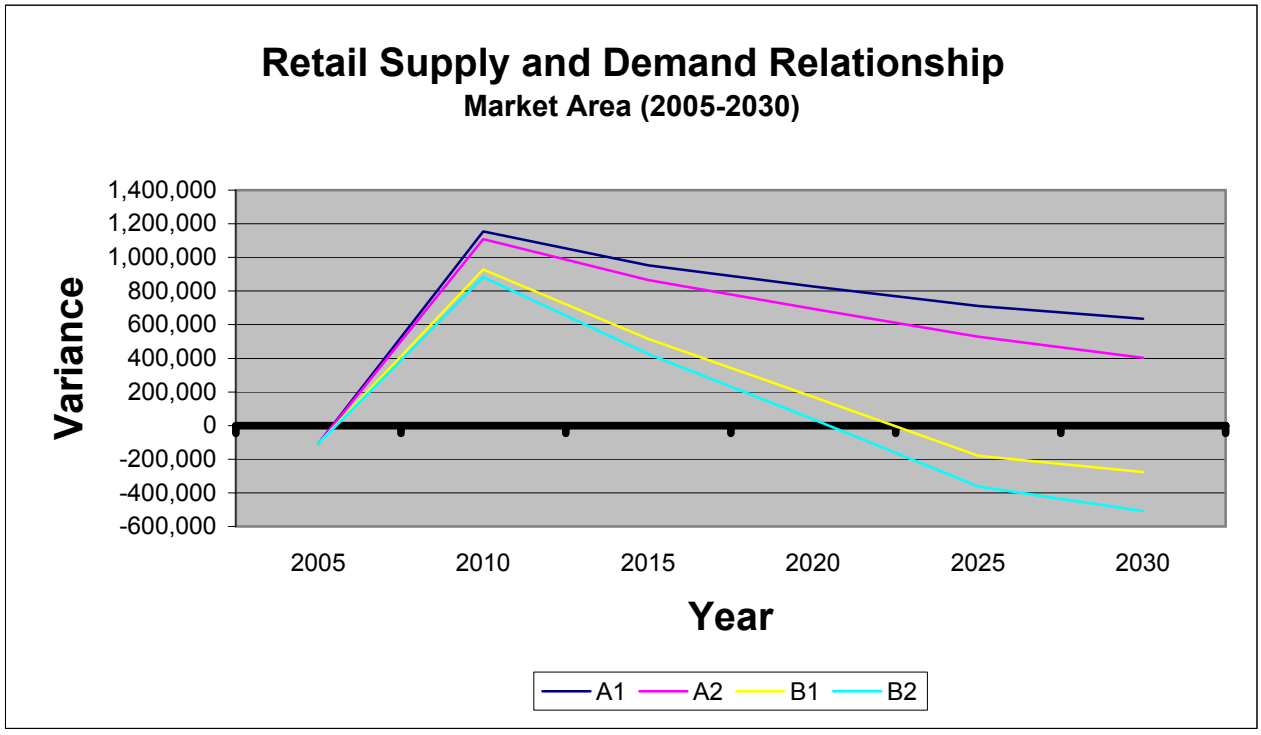


Table 5-A1/B1: Dwelling Unit Projections

Route 50 Corridor Study

Current Build-Out Scenario [14] ***Assumption***

By Subsegment, Project Study Area, Dulles PSA, Primary Market Area, Secondary Market Area

2005-2030

	2005	2010	2015	2020	2025	2030
Subsegment 1 [1]	49	290	531	773	1,014	1,255
Subsegment 2 [1]	292	465	638	812	985	1,159
Subsegment 3 [1][2]	53	61	69	77	86	93
Subsegment 4 [1][2]	1	263	525	787	1,049	1,311
Corridor Study Area Total [2]	395	1,079	1,764	2,449	3,133	3,818
Dulles PSA [3]	8,382	15,220	21,173	25,652	28,180	29,297
Primary Market Area [4]	6,626	10,116	12,421	13,106	13,790	14,475
Study Area [2]	395	1,079	1,764	2,449	3,133	3,818
South Riding and Stone Ridge [5][10]	5,852	7,038	7,038	7,038	7,038	7,038
Other [11]	379	1,999	3,619	3,619	3,619	3,619
Secondary Market Area - Base Case [6][7]	1,756	5,104	8,752	12,546	14,390	14,822
Upper Foley and Upper Broad Run [8][13]	426	1,463	2,499	3,535	4,571	4,571
Other [12]	1,330	3,641	6,253	9,011	9,819	10,251
Secondary Market Area - Alternative [9]	1,756	11,055	20,556	30,202	37,796	38,228
Upper Foley and Upper Broad Run [8][13]	426	7,414	14,302	21,190	27,977	27,977
Other [12]	1,330	3,641	6,253	9,011	9,819	10,251

(1) - Projections for each subsegment are based upon estimations of current (2005) dwelling units and the estimated build-out potential provided by Loudoun County Planning. Subsegments are assumed to achieve build-out in 2030 with a linear best fit regression (least squares) used to calculate the increase by 5-year increments. (Subsegment 3 is assumed to have achieved build-out)

(2) - The totals for Segments 3 and 4 (and the overall study area total) do not include parcels located within the Transition Policy Area, parcels associated with the Shockey Family (CPAM 2004-0022) and Greenvest/Dulles South (CPAM 2004-0021) applications, and parcels separated from the Route 50 Task Force parcels by the Shockey Family and Greenvest/Dulles South parcels (See Build-out Map). Additional parcels were included in the totals for Segment 3, located between Segment 3 and CPAM 2005-0003 and north of Evergreen Mills Road, as recommended by the Route 50 Task Force (See Build-out Map)

(3) - MWCOG Projections Round 7.0 (2005)

(4) - Primary Market Area includes the study area and all of the South Riding and Stone Ridge residential developments

(5) - Table F-7 Loudoun County Growth Summary

(6) - Secondary Market Area includes all of the Upper Foley and Upper Broad Run Subareas (including previously unaccounted for sections of Segments 3 and 4). It also includes all other dwelling units in the Dulles South Planning Subarea.

(7) - Base Case scenario assumes a potential build-out in the transition (Upper Foley and Upper Broad Run) area of 4,571 DU's based on current land use regulations

(8) - Base year (2005) DU totals provided by Loudoun County Planning Dept.

(9) - Alternative scenario assumes a potential build-out of 27,977 DU's in the transition (Upper Foley and Upper Broad Run) area - an 23,406 DU increase over the base case scenario. This increase is allocated in linearly regressed increases to the 2005 base by 5-year increment.

(10) - Total build-out for the combined South Riding and Stone Ridge Developments do not include 462 DU's in South Riding that are counted in the Segment 2 build-out and the 1007 DU's in Stone Ridge that are counted in the build-out analysis for Segment 4. COnstruction of these units is assumed to occur linearly from the 2005-2010 to the 2025-2030 analysis time frames.

(11) - "Primary Market - Other" includes all development located between Route 50 and Braddock Road. Half of all approved units are assumed to be built by 2010 with the other half built by 2015. All DU's in the study area and/or South Riding and Stone Ridge are excluded to avoid double counting

(12) - "Secondary Market - Other" includes all other development in the Dulles South Planning Subarea not previously accounted for

(13) - Pace of growth in both scenarios assumes build-out for the Upper Foley and Broad Run areas by 2025 (This best reflects the COG projections for the Dulles PSA). Growth occurs linearly (calculated using best fit regression (least squares) used to calculate the increase by 5-year increments)

(14) - Current Build-Out Scenario is based on Loudoun County Planning Department projections of study area build-out total dwelling units for 2030.

Sources: BBP Associates, Loudoun County Planning Department, MWCOG Projections

Table 5-A2/B2: Dwelling Unit Projections

Route 50 Corridor Study

Route 50 Task Force Build-Out [14] ***Assumption***

By Subsegment, Project Study Area, Dulles PSA, Primary Market Area, Secondary Market Area

2005-2030

	2005	2010	2015	2020	2025	2030
Subsegment 1 [1]	49	290	531	773	1,014	1,255
Subsegment 2 [1]	292	591	891	1,190	1,489	1,788
Subsegment 3 [1][2]	53	712	1,373	2,033	2,693	3,354
Subsegment 4 [1][2]	1	263	525	787	1,049	1,311
Corridor Study Area Total [2]	395	1,857	3,320	4,782	6,245	7,708
Dulles PSA [3]	8,382	15,998	22,729	27,986	31,291	33,187
Primary Market Area [4]	6,626	10,894	13,977	15,439	16,902	18,365
Study Area [2]	395	1,857	3,320	4,782	6,245	7,708
South Riding and Stone Ridge [5][10]	5,852	7,038	7,038	7,038	7,038	7,038
Other [11]	379	1,999	3,619	3,619	3,619	3,619
Secondary Market Area - Base Case [6][7]	1,756	5,104	8,752	12,546	14,390	14,822
Upper Foley and Upper Broad Run [8][13]	426	1,463	2,499	3,535	4,571	4,571
Other [12]	1,330	3,641	6,253	9,011	9,819	10,251
Secondary Market Area - Alternative [9]	1,756	11,055	20,556	30,202	37,796	38,228
Upper Foley and Upper Broad Run [8][13]	426	7,414	14,302	21,190	27,977	27,977
Other [12]	1,330	3,641	6,253	9,011	9,819	10,251

(1) - Projections for each subsegment are based upon estimations of current (2005) dwelling units and the estimated build-out potential provided by the Route 50 Task Force. Subsegments are assumed to achieve build-out in 2030 with a linear best fit regression (least squares) used to calculate the increase by 5-year increments. (Subsegment 3 is assumed to have achieved build-out)

(2) - The totals for Segments 3 and 4 (and the overall study area total) do not include parcels located within the Transition Policy Area, parcels associated with the Shockey Family (CPAM 2004-0022) and Greenvest/Dulles South (CPAM 2004-0021) applications, and parcels separated from the Route 50 Task Force parcels by the Shockey Family and Greenvest/Dulles South parcels (See Build-out Map). Additional parcels were included in the totals for Segment 3, located between Segment 3 and CPAM 2005-0003 and north of Evergreen Mills Road, as recommended by the Route 50 Task Force (See Build-out Map)

(3) - MWCOG Projections Round 7.0 (2005) - Projected totals are increased to reflect the increased DU development in the study area

(4) - Primary Market Area includes the study area and all of the South Riding and Stone Ridge residential developments

(5) - Table F-7 Loudoun County Growth Summary

(6) - Secondary Market Area includes all of the Upper Foley and Upper Broad Run Subareas (including previously unaccounted for sections of Segments 3 and 4). It also includes all other dwelling units in the Dulles South Planning Subarea.

(7) - Base Case scenario assumes a potential build-out in the transition (Upper Foley and Upper Broad Run) area of 4,571 DU's based on current land use regulations

(8) - Base year (2005) DU totals provided by Loudoun County Planning Dept.

(9) - Alternative scenario assumes a potential build-out of 27,977 DU's in the transition (Upper Foley and Upper Broad Run) area - an 23,406 DU increase over the base case scenario. This increase is allocated in linearly regressed increases to the 2005 base by 5-year increment.

(10) - Total build-out for the combined South Riding and Stone Ridge Developments do not include 462 DU's in South Riding that are counted in the Segment 2 build-out and the 1007 DU's in Stone Ridge that are counted in the build-out analysis for Segment 4. COnstruction of these units is assumed to occur linearly from the 2005-2010 to the 2025-2030 analysis time frames.

(11) - "Primary Market - Other" includes all development located between Route 50 and Braddock Road. Half of all approved units are assumed to be built by 2010 with the other half built by 2015. All DU's in the study area and/or South Riding and Stone Ridge are excluded to avoid double counting

(12) - "Secondary Market - Other" includes all other development in the Dulles South Planning Subarea not previously accounted for

(13) - Pace of growth in both scenarios assumes build-out for the Upper Foley and Broad Run areas by 2025 (This best reflects the COG projections for the Dulles PSA). Growth occurs linearly (calculated using best fit regression (least squares) used to calculate the increase by 5-year increments)

(14) - Route 50 Task Force Build-Out Scenario utilizes Loudoun County Planning Department projections of study area build-out total dwelling units for 2030.

Sources: BBP Associates, Loudoun County Planning Department, MWCOG Projections

Table 6-A1/B1: Projected Households

Route 50 Corridor Study

Current Build-Out Scenario Assumption

Primary Market Area and Secondary (Base and Alternative Case Assumptions) Market Area's

2005-2030

	2005	2010	2015	2020	2025	2030
Primary Market Area	6,294	9,610	11,800	12,450	13,101	13,751
Project Study Area	375	1,025	1,676	2,326	2,977	3,627
South Riding and Stone Ridge	5,559	6,686	6,686	6,686	6,686	6,686
Other	360	1,899	3,438	3,438	3,438	3,438
Secondary Market Area - Base Case	1,668	4,849	8,314	11,919	13,670	14,081
Upper Foley and Upper Broad Run	405	1,389	2,374	3,358	4,342	4,342
Other	1,264	3,459	5,941	8,561	9,328	9,738
Secondary Market Area - Alternative	1,668	10,503	19,528	28,692	35,906	36,317
Upper Foley and Upper Broad Run	405	7,044	13,587	20,131	26,578	26,578
Other	1,264	3,459	5,941	8,561	9,328	9,738

NOTE: All projections are based on an assumed DU vacancy rate of 5%. This factor is applied to the DU Projections in Table 1.

Source: BBP Associates

Table 6-A2/B2: Projected Households

Route 50 Corridor Study

Route 50 Task Force Build-Out Assumption

Primary Market Area and Secondary (Base and Alternative Case Assumptions) Market Area's

2005-2030

	2005	2010	2015	2020	2025	2030
Primary Market Area	6,294	10,349	13,278	14,667	16,057	17,447
Study Area	375	1,764	3,154	4,543	5,932	7,323
South Riding and Stone Ridge	5,559	6,686	6,686	6,686	6,686	6,686
Other	360	1,899	3,438	3,438	3,438	3,438
Secondary Market Area - Base Case	1,668	4,849	8,314	11,919	13,670	14,081
Upper Foley and Upper Broad Run	405	1,389	2,374	3,358	4,342	4,342
Other	1,264	3,459	5,941	8,561	9,328	9,738
Secondary Market Area - Alternative	1,668	10,503	19,528	28,692	35,906	36,317
Upper Foley and Upper Broad Run	405	7,044	13,587	20,131	26,578	26,578
Other	1,264	3,459	5,941	8,561	9,328	9,738

NOTE: All projections are based on an assumed DU vacancy rate of 5%. This factor is applied to the DU Projections in Table 2..

Source: BBP Associates

Table 7: Household Income Projections (2005-2030)

Route 50 Corridor Study

Region-Wide Projections

2005-2030

	2005	2010	2015	2020	2025	2030
Average HH Income [1]	$106,919	$123,020	$141,547	$162,864	$187,391	$215,612

Assumed rate of increase = 15.06% per 5 year increment

(1) - Projected HH Income is extrapolated using the total 5 year (2005-2010) increase for Loudoun County in the 2004 Growth Summary Table B-1

Source: BBP Associates, Woods and Poole Economics Inc., Loudoun County Growth Summary (2004)

Table 8-A1/B1: Aggregate Household Income Projections (1000's)

Route 50 Corridor Study

Current Build-Out Scenario Assumption

Primary Market Area and Secondary (Base and Alternative Case Assumptions) Market Area's

2005-2030

	2005	2010	2015	2020	2025	2030
Primary Market Area	$672,998	$1,182,282	$1,670,239	$2,027,706	$2,454,961	$2,964,936
Study Area	$40,096	$126,137	$237,197	$378,849	$557,786	$782,047
South Riding and Stone Ridge	$594,405	$822,524	$946,396	$1,088,923	$1,252,915	$1,441,604
Other	$38,496	$233,621	$486,645	$559,934	$644,260	$741,285
Secondary Market Area - Base Case	$178,388	$596,464	$1,176,884	$1,941,186	$2,561,685	$3,036,013
Upper Foley and Upper Broad Run	$43,270	$170,921	$336,006	$546,937	$813,736	$936,285
Other	$135,118	$425,543	$840,878	$1,394,249	$1,747,949	$2,099,728
Secondary Market Area - Alternative Case	$178,388	$1,292,039	$2,764,094	$4,672,817	$6,728,456	$7,830,300
Upper Foley and Upper Broad Run	$43,270	$866,496	$1,923,216	$3,278,568	$4,980,507	$5,730,572
Other	$135,118	$425,543	$840,878	$1,394,249	$1,747,949	$2,099,728

Note: Projected Average HH Incomes are assumed equivalent in all areas (Calculated as Projected HH Income x Projected HH). All disparities in totals are a result of rounding

Source: BBP Associates

Table 8-A2/B2: Aggregate Household Income Projections (1000's)

Route 50 Corridor Study

Route 50 Task Force Build-Out Assumption

Primary Market Area and Secondary (Base and Alternative Case Assumptions) Market Area's

2005-2030

	2005	2010	2015	2020	2025	2030
Primary Market Area	$672,998	$1,273,178	$1,879,425	$2,388,750	$3,008,857	$3,761,731
Study Area	$40,096	$217,033	$446,384	$739,892	$1,111,682	$1,578,841
South Riding and Stone Ridge	$594,405	$822,524	$946,396	$1,088,923	$1,252,915	$1,441,604
Other	$38,496	$233,621	$486,645	$559,934	$644,260	$741,285
Secondary Market Area - Base Case	$178,388	$596,464	$1,176,884	$1,941,186	$2,561,685	$3,036,013
Upper Foley and Upper Broad Run	$43,270	$170,921	$336,006	$546,937	$813,736	$936,285
Other	$135,118	$425,543	$840,878	$1,394,249	$1,747,949	$2,099,728
Secondary Market Area - Alternative	$178,388	$1,292,039	$2,764,094	$4,672,817	$6,728,456	$7,830,300
Upper Foley and Upper Broad Run	$43,270	$866,496	$1,923,216	$3,278,568	$4,980,507	$5,730,572
Other	$135,118	$425,543	$840,878	$1,394,249	$1,747,949	$2,099,728

Note: Projected Average HH Incomes are assumed equivalent in all areas (Calculated as Projected HH Income x Projected HH). All disparities in totals are a result of rounding

Source: BBP Associates

Table 9: Retail Expenditure Factors[1][2]

Route 50 Corridor Study
By Retail Category
2005-2030

Shoppers Goods	**11.9755%**
GAF[3]	6.9974%
Building Materials	1.8650%
Other	3.1130%
Convenience Goods	**15.5849%**
Grocery	6.2603%
Restaurants	6.2811%
Other	3.0435%
Other[3]	**13.9180%**
Total Retail Exp.	**41.4784%**

(1) - Factors based on % of Average HH Income per retail category for the Washington D.C. MSA

(2) - Factors are assumed to remain constant for the entire period of study (2005-2030)

(3) - "Other" Retail goods are not included in the BBP analysis of supportable retail space. They are only included in the retail expenditure series of charts for reference

Source: BBP Associates, ESRI Info Systems

Retail Category Definitions

Retail Category	NAICS	Description (Store Type)
Shoppers Goods		
GAF		
	452	General merchandise stores
	448	Clothing & clothing accessories stores
	442	Furniture & home furnishings stores
Building Materials		
	444	Building material, etc.
Other		
	443	Electronics & appliance stores
	451	Sporting goods, hobby, book, & music stores
	453	Miscellaneous store retailers
Convenience Goods		
Grocery		
	445	Food & beverage stores
Restaurants		
	722	Food Services and Drinking Places
Other		
	446	Health & personal care stores
	812	Personal and Laundry Services
Other - *Not Included in Analysis*		
	447	Gasoline stations
	454	Nonstore retailers
	441	Motor vehicle & parts dealers

Table 10-A1: Total Retail Expenditures (1,000's)
Route 50 Corridor Study
By Retail Category
Base Case Scenario - Current Build-Out Scenario (A1)
Primary Market Area and Secondary Market Areas
2005-2030

	Factors (1)(3)	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	12%	$80,595	$141,584	$200,019	$242,827	$293,993	$355,065
GAF	7%	$47,092	$82,729	$116,873	$141,887	$171,784	$207,469
Building Materials	2%	$12,552	$22,050	$31,150	$37,817	$45,785	$55,296
Other	3%	$20,951	$36,805	$51,995	$63,123	$76,424	$92,300
Convenience Goods	16%	$104,886	$184,258	$260,306	$316,017	$382,604	$462,084
Grocery	6%	$42,132	$74,015	$104,562	$126,941	$153,689	$185,615
Restaurants	6%	$42,272	$74,261	$104,910	$127,363	$154,199	$186,232
Other	3%	$20,483	$35,982	$50,833	$61,713	$74,716	$90,237
Other	14%	$93,668	$164,550	$232,464	$282,216	$341,682	$412,660
Total		**$279,149**	**$490,392**	**$692,788**	**$841,060**	**$1,018,279**	**$1,229,808**
Secondary Market Area (2)							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	12%	$5,182	$20,469	$40,238	$65,498	$97,449	$112,124
GAF	7%	$3,028	$11,960	$23,512	$38,271	$56,940	$65,516
Building Materials	2%	$807	$3,188	$6,267	$10,200	$15,176	$17,462
Other	3%	$1,347	$5,321	$10,460	$17,026	$25,332	$29,147
Convenience Goods	16%	$6,744	$26,638	$52,366	$85,240	$126,820	$145,919
Grocery	6%	$2,709	$10,700	$21,035	$34,240	$50,943	$58,614
Restaurants	6%	$2,718	$10,736	$21,105	$34,354	$51,112	$58,809
Other	3%	$1,317	$5,202	$10,226	$16,646	$24,766	$28,496
Other	14%	$6,022	$23,789	$46,765	$76,123	$113,256	$130,312
Subtotal		**$17,948**	**$70,895**	**$139,370**	**$226,861**	**$337,525**	**$388,356**
Other Portion							
Shoppers Goods	12%	$16,181	$50,961	$100,699	$166,968	$209,325	$251,452
GAF	7%	$9,455	$29,777	$58,840	$97,561	$122,311	$146,926
Building Materials	2%	$2,520	$7,936	$15,682	$26,003	$32,599	$39,160
Other	3%	$4,206	$13,247	$26,177	$43,404	$54,414	$65,365
Convenience Goods	16%	$21,058	$66,321	$131,050	$217,293	$272,417	$327,241
Grocery	6%	$8,459	$26,640	$52,642	$87,285	$109,427	$131,450
Restaurants	6%	$8,487	$26,729	$52,817	$87,575	$109,791	$131,887
Other	3%	$4,112	$12,951	$25,592	$42,434	$53,198	$63,905
Other	14%	$18,806	$59,227	$117,033	$194,052	$243,280	$292,240
Subtotal		**$56,045**	**$176,509**	**$348,783**	**$578,312**	**$725,021**	**$870,934**
Total		**$73,992**	**$247,404**	**$488,153**	**$805,173**	**$1,062,546**	**$1,259,290**
TOTAL		**$353,141**	**$737,796**	**$1,180,941**	**$1,646,233**	**$2,080,825**	**$2,489,098**

(1) - Factors based on % of Average HH Income per retail category for the Washington D.C. MSA

(2) - The secondary market is presented in compositional parts because of the different capture rates applied to the portions later in this analysis.

(3) - Retail Expenditure Factors are rounded to the nearest whole number for presentation purposes. See Chart 6 for the precise expenditure factors.

Source: BBP Associates

Table 10-A2: Total Retail Expenditures (1,000's)

Route 50 Corridor Study

By Retail Category

Base Case Scenario - Route 50 Task Force Build-Out Scenario (A2)

Primary Market Area and Secondary Market Areas

2005-2030

	Factors [1][3]	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	12%	$80,595	$152,469	$225,070	$286,064	$360,325	$450,485
GAF	7%	$47,092	$89,089	$131,511	$167,150	$210,542	$263,224
Building Materials	2%	$12,552	$23,745	$35,052	$44,551	$56,116	$70,157
Other	3%	$20,951	$39,635	$58,507	$74,363	$93,667	$117,104
Convenience Goods	16%	$104,886	$198,424	$292,907	$372,285	$468,929	$586,264
Grocery	6%	$42,132	$79,705	$117,658	$149,544	$188,364	$235,497
Restaurants	6%	$42,272	$79,970	$118,049	$150,041	$188,990	$236,280
Other	3%	$20,483	$38,749	$57,200	$72,701	$91,574	$114,487
Other	14%	$93,668	$177,201	$261,578	$332,466	$418,773	$523,558
Total		**$279,149**	**$528,094**	**$779,555**	**$990,815**	**$1,248,026**	**$1,560,306**
Secondary Market Area [2]							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	12%	$5,182	$20,469	$40,238	$65,498	$97,449	$112,124
GAF	7%	$3,028	$11,960	$23,512	$38,271	$56,940	$65,516
Building Materials	2%	$807	$3,188	$6,267	$10,200	$15,176	$17,462
Other	3%	$1,347	$5,321	$10,460	$17,026	$25,332	$29,147
Convenience Goods	16%	$6,744	$26,638	$52,366	$85,240	$126,820	$145,919
Grocery	6%	$2,709	$10,700	$21,035	$34,240	$50,943	$58,614
Restaurants	6%	$2,718	$10,736	$21,105	$34,354	$51,112	$58,809
Other	3%	$1,317	$5,202	$10,226	$16,646	$24,766	$28,496
Other	14%	$6,022	$23,789	$46,765	$76,123	$113,256	$130,312
Subtotal		**$17,948**	**$70,895**	**$139,370**	**$226,861**	**$337,525**	**$388,356**
Other Portion							
Shoppers Goods	12%	$16,181	$50,961	$100,699	$166,968	$209,325	$251,452
GAF	7%	$9,455	$29,777	$58,840	$97,561	$122,311	$146,926
Building Materials	2%	$2,520	$7,936	$15,682	$26,003	$32,599	$39,160
Other	3%	$4,206	$13,247	$26,177	$43,404	$54,414	$65,365
Convenience Goods	16%	$21,058	$66,321	$131,050	$217,293	$272,417	$327,241
Grocery	6%	$8,459	$26,640	$52,642	$87,285	$109,427	$131,450
Restaurants	6%	$8,487	$26,729	$52,817	$87,575	$109,791	$131,887
Other	3%	$4,112	$12,951	$25,592	$42,434	$53,198	$63,905
Other	14%	$18,806	$59,227	$117,033	$194,052	$243,280	$292,240
Subtotal		**$56,045**	**$176,509**	**$348,783**	**$578,312**	**$725,021**	**$870,934**
Total		**$73,992**	**$247,404**	**$488,153**	**$805,173**	**$1,062,546**	**$1,259,290**
TOTAL		**$353,141**	**$775,498**	**$1,267,708**	**$1,795,988**	**$2,310,572**	**$2,819,596**

(1) - Factors based on % of Average HH Income per retail category for the Washington D.C. MSA

(2) - The secondary market is presented in compositional parts because of the different capture rates applied to the portions later in this analysis.

(3) - Retail Expenditure Factors are rounded to the nearest whole number for presentation purposes. See Chart 6 for the precise expenditure factors.

Source: BBP Associates

Table 10-B1: Total Retail Expenditures (1,000's)

Route 50 Corridor Study

By Retail Category

Alternative Case Scenario - Current Build-Out Scenario (B1)

Primary Market Area and Secondary Market Areas

2005-2030

	Factors (1)(3)	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	12%	$80,595	$141,584	$200,019	$242,827	$293,993	$355,065
GAF	7%	$47,092	$82,729	$116,873	$141,887	$171,784	$207,469
Building Materials	2%	$12,552	$22,050	$31,150	$37,817	$45,785	$55,296
Other	3%	$20,951	$36,805	$51,995	$63,123	$76,424	$92,300
Convenience Goods	16%	$104,886	$184,258	$260,306	$316,017	$382,604	$462,084
Grocery	6%	$42,132	$74,015	$104,562	$126,941	$153,689	$185,615
Restaurants	6%	$42,272	$74,261	$104,910	$127,363	$154,199	$186,232
Other	3%	$20,483	$35,982	$50,833	$61,713	$74,716	$90,237
Other	14%	$93,668	$164,550	$232,464	$282,216	$341,682	$412,660
Total		**$279,149**	**$490,392**	**$692,788**	**$841,060**	**$1,018,279**	**$1,229,808**
Secondary Market Area (2)							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	12%	$5,182	$103,767	$230,314	$392,624	$596,439	$686,263
GAF	7%	$3,028	$60,632	$134,575	$229,415	$348,506	$400,991
Building Materials	2%	$807	$16,160	$35,868	$61,146	$92,887	$106,876
Other	3%	$1,347	$26,974	$59,871	$102,063	$155,045	$178,395
Convenience Goods	16%	$6,744	$135,043	$299,732	$510,963	$776,209	$893,106
Grocery	6%	$2,709	$54,245	$120,400	$205,249	$311,796	$358,753
Restaurants	6%	$2,718	$54,426	$120,800	$205,931	$312,833	$359,945
Other	3%	$1,317	$26,372	$58,533	$99,782	$151,580	$174,408
Other	14%	$6,022	$120,599	$267,673	$456,311	$693,187	$797,581
Subtotal		**$17,948**	**$359,409**	**$797,719**	**$1,359,898**	**$2,065,835**	**$2,376,950**
Other Portion							
Shoppers Goods	12%	$16,181	$50,961	$100,699	$166,968	$209,325	$251,452
GAF	7%	$9,455	$29,777	$58,840	$97,561	$122,311	$146,926
Building Materials	2%	$2,520	$7,936	$15,682	$26,003	$32,599	$39,160
Other	3%	$4,206	$13,247	$26,177	$43,404	$54,414	$65,365
Convenience Goods	16%	$21,058	$66,321	$131,050	$217,293	$272,417	$327,241
Grocery	6%	$8,459	$26,640	$52,642	$87,285	$109,427	$131,450
Restaurants	6%	$8,487	$26,729	$52,817	$87,575	$109,791	$131,887
Other	3%	$4,112	$12,951	$25,592	$42,434	$53,198	$63,905
Other	14%	$18,806	$59,227	$117,033	$194,052	$243,280	$292,240
Subtotal		**$56,045**	**$176,509**	**$348,783**	**$578,312**	**$725,021**	**$870,934**
Total		**$73,992**	**$535,917**	**$1,146,502**	**$1,938,210**	**$2,790,856**	**$3,247,884**
TOTAL		**$353,141**	**$1,026,309**	**$1,839,291**	**$2,779,270**	**$3,809,135**	**$4,477,692**

(1) - Factors based on % of Average HH Income per retail category for the Washington D.C. MSA

(2) - The secondary market is presented in compositional parts because of the different capture rates applied to the portions later in this analysis.

(3) - Retail Expenditure Factors are rounded to the nearest whole number for presentation purposes. See Chart 6 for the precise expenditure factors.

Source: BBP Associates

Table 10-B2: Total Retail Expenditures (1,000's)

Route 50 Corridor Study

By Retail Category

Alternative Case Scenario - Route 50 Task Force Build-Out Scenario (B2)

Primary Market Area and Secondary Market Areas

2005-2030

	Factors (1)(3)	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	12%	$80,595	$152,469	$225,070	$286,064	$360,325	$450,485
GAF	7%	$47,092	$89,089	$131,511	$167,150	$210,542	$263,224
Building Materials	2%	$12,552	$23,745	$35,052	$44,551	$56,116	$70,157
Other	3%	$20,951	$39,635	$58,507	$74,363	$93,667	$117,104
Convenience Goods	16%	$104,886	$198,424	$292,907	$372,285	$468,929	$586,264
Grocery	6%	$42,132	$79,705	$117,658	$149,544	$188,364	$235,497
Restaurants	6%	$42,272	$79,970	$118,049	$150,041	$188,990	$236,280
Other	3%	$20,483	$38,749	$57,200	$72,701	$91,574	$114,487
Other	14%	$93,668	$177,201	$261,578	$332,466	$418,773	$523,558
Total		**$279,149**	**$528,094**	**$779,555**	**$990,815**	**$1,248,026**	**$1,560,306**
Secondary Market Area (2)							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	12%	$5,182	$103,767	$230,314	$392,624	$596,439	$686,263
GAF	7%	$3,028	$60,632	$134,575	$229,415	$348,506	$400,991
Building Materials	2%	$807	$16,160	$35,868	$61,146	$92,887	$106,876
Other	3%	$1,347	$26,974	$59,871	$102,063	$155,045	$178,395
Convenience Goods	16%	$6,744	$135,043	$299,732	$510,963	$776,209	$893,106
Grocery	6%	$2,709	$54,245	$120,400	$205,249	$311,796	$358,753
Restaurants	6%	$2,718	$54,426	$120,800	$205,931	$312,833	$359,945
Other	3%	$1,317	$26,372	$58,533	$99,782	$151,580	$174,408
Other	14%	$6,022	$120,599	$267,673	$456,311	$693,187	$797,581
Subtotal		**$17,948**	**$359,409**	**$797,719**	**$1,359,898**	**$2,065,835**	**$2,376,950**
Other Portion							
Shoppers Goods	12%	$16,181	$50,961	$100,699	$166,968	$209,325	$251,452
GAF	7%	$9,455	$29,777	$58,840	$97,561	$122,311	$146,926
Building Materials	2%	$2,520	$7,936	$15,682	$26,003	$32,599	$39,160
Other	3%	$4,206	$13,247	$26,177	$43,404	$54,414	$65,365
Convenience Goods	16%	$21,058	$66,321	$131,050	$217,293	$272,417	$327,241
Grocery	6%	$8,459	$26,640	$52,642	$87,285	$109,427	$131,450
Restaurants	6%	$8,487	$26,729	$52,817	$87,575	$109,791	$131,887
Other	3%	$4,112	$12,951	$25,592	$42,434	$53,198	$63,905
Other	14%	$18,806	$59,227	$117,033	$194,052	$243,280	$292,240
Subtotal		**$56,045**	**$176,509**	**$348,783**	**$578,312**	**$725,021**	**$870,934**
Total		**$73,992**	**$535,917**	**$1,146,502**	**$1,938,210**	**$2,790,856**	**$3,247,884**
TOTAL		**$353,141**	**$1,064,011**	**$1,926,058**	**$2,929,025**	**$4,038,882**	**$4,808,190**

(1) - Factors based on % of Average HH Income per retail category for the Washington D.C. MSA

(2) - The secondary market is presented in compositional parts because of the different capture rates applied to the portions later in this analysis.

(3) - Retail Expenditure Factors are rounded to the nearest whole number for presentation purposes. See Chart 6 for the precise expenditure factors.

Source: BBP Associates

Table 11 - A1/A2/B1/B2: Summary - Total Retail Expenditures (1,000's)

Route 50 Corridor Study

All Scenarios

Primary Market Area and Secondary Market Area's

2005-2030

Base Case - Current Build-Out Scenarios (A1)						
	2005	2010	2015	2020	2025	2030
Primary Market Area	$279,149	$490,392	$692,788	$841,060	$1,018,279	$1,229,808
Secondary Market Area	$73,992	$247,404	$488,153	$805,173	$1,062,546	$1,259,290
Upper Foley and Upper Broad Run	$17,948	$70,895	$139,370	$226,861	$337,525	$388,356
Other	$56,045	$176,509	$348,783	$578,312	$725,021	$870,934
Total	**$353,141**	**$737,796**	**$1,180,941**	**$1,646,233**	**$2,080,825**	**$2,489,098**

Base Case - Route 50 Task Force Build-Out Scenarios (A2)						
	2005	2010	2015	2020	2025	2030
Primary Market Area	$279,149	$528,094	$779,555	$990,815	$1,248,026	$1,560,306
Secondary Market Area	$73,992	$247,404	$488,153	$805,173	$1,062,546	$1,259,290
Upper Foley and Upper Broad Run	$17,948	$70,895	$139,370	$226,861	$337,525	$388,356
Other	$56,045	$176,509	$348,783	$578,312	$725,021	$870,934
Total	**$353,141**	**$775,498**	**$1,267,708**	**$1,795,988**	**$2,310,572**	**$2,819,596**

Alternative Case - Current Build-Out Scenarios (B1)						
	2005	2010	2015	2020	2025	2030
Primary Market Area	$279,149	$490,392	$692,788	$841,060	$1,018,279	$1,229,808
Secondary Market Area	$73,992	$535,917	$1,146,502	$1,938,210	$2,790,856	$3,247,884
Upper Foley and Upper Broad Run	$17,948	$359,409	$797,719	$1,359,898	$2,065,835	$2,376,950
Other	$56,045	$176,509	$348,783	$578,312	$725,021	$870,934
Total	**$353,141**	**$1,026,309**	**$1,839,291**	**$2,779,270**	**$3,809,135**	**$4,477,692**

Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	2010	2015	2020	2025	2030
Primary Market Area	$279,149	$528,094	$779,555	$990,815	$1,248,026	$1,560,306
Secondary Market Area	$73,992	$535,917	$1,146,502	$1,938,210	$2,790,856	$3,247,884
Upper Foley and Upper Broad Run	$17,948	$359,409	$797,719	$1,359,898	$2,065,835	$2,376,950
Other	$56,045	$176,509	$348,783	$578,312	$725,021	$870,934
Total	**$353,141**	**$1,064,011**	**$1,926,058**	**$2,929,025**	**$4,038,882**	**$4,808,190**

Source: BBP Associates

Table 12-A1: Potential Sales by Market Source Analysis (1,000's)

Route 50 Corridor Study

By Retail Category

Base Case Scenario - Current Build-Out Scenario (A1)

Primary Market Area and Secondary Market Areas

2005-2030

	Capture Rate [1][2]	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	30%	$24,178	$42,475	$60,006	$72,848	$88,198	$106,519
GAF	30%	$14,128	$24,819	$35,062	$42,566	$51,535	$62,241
Building Materials	30%	$3,765	$6,615	$9,345	$11,345	$13,736	$16,589
Other	30%	$6,285	$11,041	$15,599	$18,937	$22,927	$27,690
Convenience Goods	70%	$73,420	$128,981	$182,214	$221,212	$267,823	$323,458
Grocery	70%	$29,492	$51,810	$73,194	$88,859	$107,582	$129,930
Restaurants	70%	$29,590	$51,983	$73,437	$89,154	$107,940	$130,362
Other	70%	$14,338	$25,188	$35,583	$43,199	$52,301	$63,166
Total		**$97,599**	**$171,456**	**$242,220**	**$294,060**	**$356,021**	**$429,978**
Secondary Market Area							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	20%	$1,036	$4,094	$8,048	$13,100	$19,490	$22,425
GAF	20%	$606	$2,392	$4,702	$7,654	$11,388	$13,103
Building Materials	20%	$161	$638	$1,253	$2,040	$3,035	$3,492
Other	20%	$269	$1,064	$2,092	$3,405	$5,066	$5,829
Convenience Goods	45%	$3,035	$11,987	$23,565	$38,358	$57,069	$65,664
Grocery	45%	$1,219	$4,815	$9,466	$15,408	$22,924	$26,377
Restaurants	45%	$1,223	$4,831	$9,497	$15,459	$23,000	$26,464
Other	45%	$593	$2,341	$4,602	$7,491	$11,145	$12,823
Subtotal		**$4,071**	**$16,081**	**$31,612**	**$51,458**	**$76,559**	**$88,089**
Other Portion							
Shoppers Goods	10%	$1,618	$5,096	$10,070	$16,697	$20,932	$25,145
GAF	10%	$945	$2,978	$5,884	$9,756	$12,231	$14,693
Building Materials	10%	$252	$794	$1,568	$2,600	$3,260	$3,916
Other	10%	$421	$1,325	$2,618	$4,340	$5,441	$6,537
Convenience Goods	20%	$4,212	$13,264	$26,210	$43,459	$54,483	$65,448
Grocery	20%	$1,692	$5,328	$10,528	$17,457	$21,885	$26,290
Restaurants	20%	$1,697	$5,346	$10,563	$17,515	$21,958	$26,377
Other	20%	$822	$2,590	$5,118	$8,487	$10,640	$12,781
Subtotal		**$5,830**	**$18,360**	**$36,280**	**$60,155**	**$75,416**	**$90,593**
Total		**$9,901**	**$34,441**	**$67,892**	**$111,613**	**$151,975**	**$178,682**
TOTAL		**$107,499**	**$205,897**	**$310,112**	**$405,673**	**$507,996**	**$608,660**

Note: The "Other" retail category is excluded from the BBP capture rate analysis

(1) - Capture Rates are calculated as an estimated of the percentage of expenditures (by retail category) made in the study area by residents of each of the defined market areas. Different capture rates are applied to the subareas of the secondary market area to acknowledge the lack of alternative facilities in the Upper Broad and Upper Foley subareas.

(2) Capture Rates are based on the proximity of the market area to the study area, proximity to alternative facilities, travel times (driveshed) analysis, and industry standards.

Source: BBP Associates

Table 12-A2: Sales by Market Source Analysis (1,000's)

Route 50 Corridor Study

By Retail Category

Base Case Scenario - Route 50 Task Force Build-Out Scenario (A2)

Primary Market Area and Secondary Market Areas

2005-2030

	Capture Rate [1][2]	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	30%	$24,178	$45,741	$67,521	$85,819	$108,097	$135,145
GAF	30%	$14,128	$26,727	$39,453	$50,145	$63,163	$78,967
Building Materials	30%	$3,765	$7,123	$10,515	$13,365	$16,835	$21,047
Other	30%	$6,285	$11,890	$17,552	$22,309	$28,100	$35,131
Convenience Goods	70%	$73,420	$138,897	$205,035	$260,600	$328,250	$410,384
Grocery	70%	$29,492	$55,794	$82,361	$104,680	$131,855	$164,848
Restaurants	70%	$29,590	$55,979	$82,634	$105,028	$132,293	$165,396
Other	70%	$14,338	$27,124	$40,040	$50,891	$64,102	$80,141
Total		**$97,599**	**$184,637**	**$272,556**	**$346,419**	**$436,347**	**$545,530**
Secondary Market Area							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	20%	$1,036	$4,094	$8,048	$13,100	$19,490	$22,425
GAF	20%	$606	$2,392	$4,702	$7,654	$11,388	$13,103
Building Materials	20%	$161	$638	$1,253	$2,040	$3,035	$3,492
Other	20%	$269	$1,064	$2,092	$3,405	$5,066	$5,829
Convenience Goods	45%	$3,035	$11,987	$23,565	$38,358	$57,069	$65,664
Grocery	45%	$1,219	$4,815	$9,466	$15,408	$22,924	$26,377
Restaurants	45%	$1,223	$4,831	$9,497	$15,459	$23,000	$26,464
Other	45%	$593	$2,341	$4,602	$7,491	$11,145	$12,823
Subtotal		**$4,071**	**$16,081**	**$31,612**	**$51,458**	**$76,559**	**$88,089**
Other Portion							
Shoppers Goods	10%	$1,618	$5,096	$10,070	$16,697	$20,932	$25,145
GAF	10%	$945	$2,978	$5,884	$9,756	$12,231	$14,693
Building Materials	10%	$252	$794	$1,568	$2,600	$3,260	$3,916
Other	10%	$421	$1,325	$2,618	$4,340	$5,441	$6,537
Convenience Goods	20%	$4,212	$13,264	$26,210	$43,459	$54,483	$65,448
Grocery	20%	$1,692	$5,328	$10,528	$17,457	$21,885	$26,290
Restaurants	20%	$1,697	$5,346	$10,563	$17,515	$21,958	$26,377
Other	20%	$822	$2,590	$5,118	$8,487	$10,640	$12,781
Subtotal		**$5,830**	**$18,360**	**$36,280**	**$60,155**	**$75,416**	**$90,593**
Total		**$9,901**	**$34,441**	**$67,892**	**$111,613**	**$151,975**	**$178,682**
TOTAL		**$107,499**	**$219,078**	**$340,448**	**$458,032**	**$588,322**	**$724,212**

Note: The "Other" retail category is excluded from the BBP capture rate analysis

(1) - Capture Rates are calculated as an estimated of the percentage of expenditures (by retail category) made in the study area by residents of each of the defined market areas. Different capture rates are applied to the subareas of the secondary market area to acknowledge the lack of alternative facilities in the Upper Broad and Upper Foley subareas.

(2) Capture Rates are based on the proximity of the market area to the study area, proximity to alternative facilities, travel times (driveshed) analysis, and industry standards.

Source: BBP Associates

Table 12-B1: Sales by Market Source Analysis (1,000's)

Route 50 Corridor Study

By Retail Category

Alternative Case Scenario - Current Build-Out Scenario (B1)

Primary Market Area and Secondary Market Areas

2005-2030

	Capture Rate (1)(2)	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	30%	$24,178	$42,475	$60,006	$72,848	$88,198	$106,519
GAF	30%	$14,128	$24,819	$35,062	$42,566	$51,535	$62,241
Building Materials	30%	$3,765	$6,615	$9,345	$11,345	$13,736	$16,589
Other	30%	$6,285	$11,041	$15,599	$18,937	$22,927	$27,690
Convenience Goods	70%	$73,420	$128,981	$182,214	$221,212	$267,823	$323,458
Grocery	70%	$29,492	$51,810	$73,194	$88,859	$107,582	$129,930
Restaurants	70%	$29,590	$51,983	$73,437	$89,154	$107,940	$130,362
Other	70%	$14,338	$25,188	$35,583	$43,199	$52,301	$63,166
Total		**$97,599**	**$171,456**	**$242,220**	**$294,060**	**$356,021**	**$429,978**
Secondary Market Area							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	20%	$1,036	$20,753	$46,063	$78,525	$119,288	$137,253
GAF	20%	$606	$12,126	$26,915	$45,883	$69,701	$80,198
Building Materials	20%	$161	$3,232	$7,174	$12,229	$18,577	$21,375
Other	20%	$269	$5,395	$11,974	$20,413	$31,009	$35,679
Convenience Goods	45%	$3,035	$60,769	$134,879	$229,933	$349,294	$401,898
Grocery	45%	$1,219	$24,410	$54,180	$92,362	$140,308	$161,439
Restaurants	45%	$1,223	$24,492	$54,360	$92,669	$140,775	$161,975
Other	45%	$593	$11,867	$26,340	$44,902	$68,211	$78,484
Subtotal		**$4,071**	**$81,523**	**$180,942**	**$308,458**	**$468,582**	**$539,150**
Other Portion							
Shoppers Goods	10%	$1,618	$5,096	$10,070	$16,697	$20,932	$25,145
GAF	10%	$945	$2,978	$5,884	$9,756	$12,231	$14,693
Building Materials	10%	$252	$794	$1,568	$2,600	$3,260	$3,916
Other	10%	$421	$1,325	$2,618	$4,340	$5,441	$6,537
Convenience Goods	20%	$4,212	$13,264	$26,210	$43,459	$54,483	$65,448
Grocery	20%	$1,692	$5,328	$10,528	$17,457	$21,885	$26,290
Restaurants	20%	$1,697	$5,346	$10,563	$17,515	$21,958	$26,377
Other	20%	$822	$2,590	$5,118	$8,487	$10,640	$12,781
Subtotal		**$5,830**	**$18,360**	**$36,280**	**$60,155**	**$75,416**	**$90,593**
Total		**$9,901**	**$99,883**	**$217,222**	**$368,613**	**$543,998**	**$629,744**
TOTAL		**$107,499**	**$271,339**	**$459,442**	**$662,673**	**$900,018**	**$1,059,722**

Note: The "Other" retail category is excluded from the BBP capture rate analysis

(1) - Capture Rates are calculated as an estimated of the percentage of expenditures (by retail category) made in the study area by residents of each of the defined market areas. Different capture rates are applied to the subareas of the secondary market area to acknowledge the lack of alternative facilities in the Upper Broad and Upper Foley subareas.

(2) Capture Rates are based on the proximity of the market area to the study area, proximity to alternative facilities, travel times (driveshed) analysis, and industry standards.

Source: BBP Associates

Table 12-B2: Sales by Market Source Analysis (1,000's)

Route 50 Corridor Study

By Retail Category

Alternative Case Scenario - Route 50 Task Force Build-Out Scenario (B2)

Primary Market Area and Secondary Market Areas

2005-2030

	Capture Rate (1)(2)	2005	2010	2015	2020	2025	2030
Primary Market Area							
Shoppers Goods	30%	$24,178	$45,741	$67,521	$85,819	$108,097	$135,145
GAF	30%	$14,128	$26,727	$39,453	$50,145	$63,163	$78,967
Building Materials	30%	$3,765	$7,123	$10,515	$13,365	$16,835	$21,047
Other	30%	$6,285	$11,890	$17,552	$22,309	$28,100	$35,131
Convenience Goods	70%	$73,420	$138,897	$205,035	$260,600	$328,250	$410,384
Grocery	70%	$29,492	$55,794	$82,361	$104,680	$131,855	$164,848
Restaurants	70%	$29,590	$55,979	$82,634	$105,028	$132,293	$165,396
Other	70%	$14,338	$27,124	$40,040	$50,891	$64,102	$80,141
Total		**$97,599**	**$184,637**	**$272,556**	**$346,419**	**$436,347**	**$545,530**
Secondary Market Area							
Upper Foley and Upper Broad Run Portion							
Shoppers Goods	20%	$1,036	$20,753	$46,063	$78,525	$119,288	$137,253
GAF	20%	$606	$12,126	$26,915	$45,883	$69,701	$80,198
Building Materials	20%	$161	$3,232	$7,174	$12,229	$18,577	$21,375
Other	20%	$269	$5,395	$11,974	$20,413	$31,009	$35,679
Convenience Goods	45%	$3,035	$60,769	$134,879	$229,933	$349,294	$401,898
Grocery	45%	$1,219	$24,410	$54,180	$92,362	$140,308	$161,439
Restaurants	45%	$1,223	$24,492	$54,360	$92,669	$140,775	$161,975
Other	45%	$593	$11,867	$26,340	$44,902	$68,211	$78,484
Subtotal		**$4,071**	**$81,523**	**$180,942**	**$308,458**	**$468,582**	**$539,150**
Other Portion							
Shoppers Goods	10%	$1,618	$5,096	$10,070	$16,697	$20,932	$25,145
GAF	10%	$945	$2,978	$5,884	$9,756	$12,231	$14,693
Building Materials	10%	$252	$794	$1,568	$2,600	$3,260	$3,916
Other	10%	$421	$1,325	$2,618	$4,340	$5,441	$6,537
Convenience Goods	20%	$4,212	$13,264	$26,210	$43,459	$54,483	$65,448
Grocery	20%	$1,692	$5,328	$10,528	$17,457	$21,885	$26,290
Restaurants	20%	$1,697	$5,346	$10,563	$17,515	$21,958	$26,377
Other	20%	$822	$2,590	$5,118	$8,487	$10,640	$12,781
Subtotal		**$5,830**	**$18,360**	**$36,280**	**$60,155**	**$75,416**	**$90,593**
Total		**$9,901**	**$99,883**	**$217,222**	**$368,613**	**$543,998**	**$629,744**
TOTAL		**$107,499**	**$284,520**	**$489,778**	**$715,032**	**$980,345**	**$1,175,274**

Note: The "Other" retail category is excluded from the BBP capture rate analysis

(1) - Capture Rates are calculated as an estimated of the percentage of expenditures (by retail category) made in the study area by residents of each of the defined market areas. Different capture rates are applied to the subareas of the secondary market area to acknowledge the lack of alternative facilities in the Upper Broad and Upper Foley subareas.

(2) Capture Rates are based on the proximity of the market area to the study area, proximity to alternative facilities, travel times (driveshed) analysis, and industry standards.

Source: BBP Associates

Table 13-A1/A2/B1/B2: Sales by Market Source SUMMARY (1,000's)

Route 50 Corridor Study
By Market Source
All Scenarios
Primary Market Area and Secondary Market Area's
2005-2030

Base Case - Current Build-Out Scenarios (A1)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	$97,599	$171,456	$242,220	$294,060	$356,021	$429,978
Secondary Market Area	$9,901	$34,441	$67,892	$111,613	$151,975	$178,682
All Other (1)	$11,944	$22,877	$34,457	$45,075	$56,444	$67,629
Total	**$119,444**	**$228,774**	**$344,569**	**$450,748**	**$564,439**	**$676,289**

Base Case - Route 50 Task Force Build-Out Scenarios (A2)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	$97,599	$184,637	$272,556	$346,419	$436,347	$545,530
Secondary Market Area	$9,901	$34,441	$67,892	$111,613	$151,975	$178,682
All Other (1)	$11,944	$24,342	$37,828	$50,892	$65,369	$80,468
Total	**$119,444**	**$243,421**	**$378,276**	**$508,924**	**$653,691**	**$804,680**

Alternative Case - Current Build-Out Scenarios (B1)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	$97,599	$171,456	$242,220	$294,060	$356,021	$429,978
Secondary Market Area	$9,901	$99,883	$217,222	$368,613	$543,998	$629,744
All Other (1)	$11,944	$30,149	$51,049	$73,630	$100,002	$117,747
Total	**$119,444**	**$301,487**	**$510,491**	**$736,304**	**$1,000,021**	**$1,177,469**

Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	$97,599	$184,637	$272,556	$346,419	$436,347	$545,530
Secondary Market Area	$9,901	$99,883	$217,222	$368,613	$543,998	$629,744
All Other (1)	$11,944	$31,613	$54,420	$79,448	$108,927	$130,586
Total	**$119,444**	**$316,134**	**$544,198**	**$794,480**	**$1,089,272**	**$1,305,860**

(1) - Sales to all other sources (market areas) of retail demand = 10% of total sales (implied by Primary + Secondary = 90% of total sales)

Source: BBP Associates

Table 14-A1/A2/B1/B2: Potential Sales by Market Source (%)

Route 50 Corridor Study

By Market Source

All Scenarios

Primary Market Area and Secondary Market Area's

2005-2030

Base Case - Current Build-Out Scenarios (A1)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	82%	75%	70%	65%	63%	64%
Secondary Market Area	8%	15%	20%	25%	27%	26%
All Other [(1)]	10%	10%	10%	10%	10%	10%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Base Case - Route 50 Task Force Build-Out Scenarios (A2)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	82%	76%	72%	68%	67%	68%
Secondary Market Area	8%	14%	18%	22%	23%	22%
All Other [(1)]	10%	10%	10%	10%	10%	10%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Alternative Case - Current Build-Out Scenarios (B1)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	82%	57%	47%	40%	36%	37%
Secondary Market Area	8%	33%	43%	50%	54%	53%
All Other [(1)]	10%	10%	10%	10%	10%	10%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	**2010**	**2015**	**2020**	**2025**	**2030**
Primary Market Area	82%	58%	50%	44%	40%	42%
Secondary Market Area	8%	32%	40%	46%	50%	48%
All Other [(1)]	10%	10%	10%	10%	10%	10%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

(1) - Sales to all other sources = 10% of total sales (implied by Primary + Secondary = 90% of total sales)

Source: BBP Associates

Table 15-A1/A2/B1/B2: Supportable Sales ($) (by Retail Category) (1,000's)

Route 50 Corridor Study

By Retail Category

By Scenario

2005-2030

Base Case - Current Build-Out Scenarios (A1)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**$26,833**	**$51,665**	**$78,123**	**$102,645**	**$128,620**	**$154,090**
GAF	$15,679	$30,188	$45,648	$59,976	$75,154	$90,036
Building Materials	$4,179	$8,046	$12,167	$15,985	$20,031	$23,997
Other	$6,975	$13,430	$20,308	$26,683	$33,435	$40,056
Convenience Goods	**$80,667**	**$154,232**	**$231,989**	**$303,028**	**$379,375**	**$454,571**
Grocery	$32,403	$61,953	$93,188	$121,724	$152,392	$182,597
Restaurants	$32,511	$62,159	$93,498	$122,128	$152,898	$183,204
Other	$15,753	$30,119	$45,303	$59,176	$74,086	$88,770
Base Case - Route 50 Task Force Build-Out Scenarios (B1)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**$26,833**	**$54,930**	**$85,638**	**$115,616**	**$148,520**	**$182,716**
GAF	$15,679	$32,097	$50,040	$67,556	$86,782	$106,763
Building Materials	$4,179	$8,555	$13,337	$18,006	$23,130	$28,455
Other	$6,975	$14,279	$22,262	$30,054	$38,608	$47,497
Convenience Goods	**$80,667**	**$164,148**	**$254,810**	**$342,416**	**$439,802**	**$541,496**
Grocery	$32,403	$65,937	$102,355	$137,545	$176,665	$217,514
Restaurants	$32,511	$66,156	$102,695	$138,003	$177,252	$218,237
Other	$15,753	$32,055	$49,760	$66,868	$85,886	$105,745
Alternative Case - Current Build-Out Scenarios (A2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**$26,833**	**$68,325**	**$116,138**	**$168,070**	**$228,418**	**$268,917**
GAF	$15,679	$39,923	$67,861	$98,205	$133,467	$157,131
Building Materials	$4,179	$10,641	$18,087	$26,175	$35,573	$41,880
Other	$6,975	$17,761	$30,190	$43,690	$59,378	$69,906
Convenience Goods	**$80,667**	**$203,014**	**$343,303**	**$494,604**	**$671,600**	**$790,805**
Grocery	$32,403	$81,549	$137,902	$198,678	$269,776	$317,659
Restaurants	$32,511	$81,820	$138,360	$199,338	$270,672	$318,715
Other	$15,753	$39,645	$67,041	$96,588	$131,152	$154,431
Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**$26,833**	**$71,590**	**$123,654**	**$181,041**	**$248,318**	**$297,543**
GAF	$15,679	$41,831	$72,252	$105,784	$145,095	$173,858
Building Materials	$4,179	$11,149	$19,257	$28,195	$38,672	$46,338
Other	$6,975	$18,610	$32,144	$47,062	$64,551	$77,347
Convenience Goods	**$80,667**	**$212,930**	**$366,125**	**$533,991**	**$732,027**	**$877,730**
Grocery	$32,403	$85,532	$147,069	$214,499	$294,049	$352,576
Restaurants	$32,511	$85,816	$147,558	$215,213	$295,026	$353,748
Other	$15,753	$41,582	$71,498	$104,279	$142,953	$171,406

Note: Supportable Sales per SF is calculated as a factor of household income, retail expenditure (by household), retail expenditures (by retail category), and capture rates by market source

Source: BBP Associates

Table 16: Sales per Square Foot (By Retail Category)

Route 50 Corridor Study

By Retail Category

2005-2030

	2005	2010	2015	2020	2025	2030
Shoppers Goods						
GAF[(1)]	334	401	472	542	610	686
Building Materials[(1)]	91	110	129	148	167	188
Other[(1)]	185	221	260	299	337	379
Convenience Goods						
Grocery[(1)]	292	351	412	474	533	600
Restaurants[(1)]	309	371	436	501	564	634
Other[(1)]	160	191	225	259	291	327
Average Rate of Increase (% per year) [(2)]		4.0%	3.5%	3.0%	2.5%	2.5%
Total 5-year Period Change		20.0%	17.5%	15.0%	12.5%	12.5%
Increase Factor[(3)]		120.0%	117.5%	115.0%	112.5%	112.5%

(1) - Sales per square foot factors (2005) calculated as the average sales per square foot for existing retail in the study area. Factors increased at a variable rate for each five-year increment. See footnote 2 for description of the methodology behind the assumed rate of increase.

(2) - Assumes pre-servicing in early years as the rate of change in retail sales productivity is greater than the rate of change in average household income. In later years, as the study area moves toward build-out, it is assumed that the rate of change in retail sales productivity is slightly less than the rate of chang ein average household income.

(3) - Rate applied to each associated five-year period to determine supportable sales per square foot totals

Source: BBP Associates

Table 17-A1/A2/B1/B2: Supportable Retail Space (Sq. Ft.)
Route 50 Corridor Study
By Retail Category
All Scenarios
2005-2030

Base Case - Current Build-Out Scenarios (A1)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**209,239**	**269,271**	**307,644**	**342,664**	**364,905**
GAF	46,881	75,222	96,804	110,599	123,189	131,185
Building Materials	45,719	73,358	94,405	107,858	120,136	127,934
Other	37,805	60,659	78,062	89,187	99,339	105,787
Convenience Goods	**314,766**	**501,517**	**642,009**	**729,221**	**811,508**	**864,316**
Grocery	110,850	176,618	226,094	256,807	285,786	304,383
Restaurants	105,176	167,577	214,521	243,663	271,158	288,803
Other	98,740	157,322	201,394	228,751	254,564	271,130
TOTAL SUPPORTABLE	**445,171**	**710,757**	**911,281**	**1,036,865**	**1,154,172**	**1,229,221**
Base Case - Route 50 Task Force Build-Out Scenarios (A2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**222,465**	**295,175**	**346,520**	**395,679**	**432,696**
GAF	46,881	79,977	106,116	124,575	142,248	155,556
Building Materials	45,719	77,995	103,486	121,488	138,723	151,700
Other	37,805	64,493	85,572	100,457	114,708	125,440
Convenience Goods	**314,766**	**533,762**	**705,165**	**824,006**	**940,766**	**1,029,596**
Grocery	110,850	187,973	248,335	290,187	331,306	362,589
Restaurants	105,176	178,352	235,624	275,334	314,348	344,030
Other	98,740	167,437	221,205	258,485	295,111	322,977
TOTAL SUPPORTABLE	**445,171**	**756,227**	**1,000,339**	**1,170,526**	**1,336,445**	**1,462,292**
Alternative Case - Current Build-Out Scenarios (B1)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**276,710**	**400,300**	**503,734**	**608,542**	**636,833**
GAF	46,881	99,478	143,909	181,094	218,773	228,944
Building Materials	45,719	97,013	140,343	176,606	213,351	223,270
Other	37,805	80,219	116,048	146,034	176,418	184,619
Convenience Goods	**314,766**	**660,143**	**950,063**	**1,190,237**	**1,436,596**	**1,503,628**
Grocery	110,850	232,480	334,580	419,162	505,921	529,528
Restaurants	105,176	220,581	317,455	397,707	480,025	502,423
Other	98,740	207,082	298,028	373,369	450,650	471,677
TOTAL SUPPORTABLE	**445,171**	**936,853**	**1,350,363**	**1,693,972**	**2,045,138**	**2,140,461**
Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**289,935**	**426,203**	**542,611**	**661,557**	**704,623**
GAF	46,881	104,233	153,222	195,070	237,832	253,315
Building Materials	45,719	101,650	149,424	190,236	231,938	247,037
Other	37,805	84,053	123,557	157,304	191,787	204,272
Convenience Goods	**314,766**	**692,388**	**1,013,218**	**1,285,022**	**1,565,854**	**1,668,908**
Grocery	110,850	243,836	356,822	452,542	551,441	587,734
Restaurants	105,176	231,355	338,558	429,378	523,215	557,650
Other	98,740	217,197	317,839	403,102	491,197	523,524
TOTAL SUPPORTABLE	**445,171**	**982,323**	**1,439,422**	**1,827,633**	**2,227,410**	**2,373,532**

Source: BBP Associates

Table 18-A1/A2/B1/B2: New Supportable Retail Space (Sq. Ft.)

Route 50 Corridor Study

By Retail Category

All Scenarios

2005, 2005-2010, 2010-2015, 2015-2020, 2020-2025, 2025-2030

Base Case - Current Build-Out Scenarios (A1)						
	2005	2005 to 2010	2010 to 2015	2015 to 2020	2020 to 2025	2025 to 2030
Shoppers Goods	**130,405**	**78,834**	**60,032**	**38,373**	**35,020**	**22,241**
GAF	46,881	28,341	21,582	13,795	12,590	7,996
Building Materials	45,719	27,639	21,047	13,453	12,278	7,798
Other	37,805	22,854	17,403	11,124	10,152	6,448
Convenience Goods	**314,766**	**186,752**	**140,492**	**87,212**	**82,287**	**52,808**
Grocery	110,850	65,768	49,477	30,713	28,979	18,597
Restaurants	105,176	62,401	46,944	29,141	27,495	17,645
Other	98,740	58,583	44,071	27,358	25,813	16,565
TOTAL SUPPORTABLE	**445,171**	**265,586**	**200,524**	**125,585**	**117,307**	**75,049**
Base Case - Route 50 Task Force Build-Out Scenarios (B1)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**92,059**	**72,710**	**51,346**	**49,159**	**37,016**
GAF	46,881	33,096	26,139	18,459	17,673	13,307
Building Materials	45,719	32,275	25,492	18,001	17,235	12,978
Other	37,805	26,688	21,079	14,885	14,251	10,731
Convenience Goods	**314,766**	**218,996**	**171,403**	**118,842**	**116,759**	**88,831**
Grocery	110,850	77,123	60,362	41,852	41,119	31,283
Restaurants	105,176	73,176	57,273	39,710	39,014	29,682
Other	98,740	68,698	53,768	37,280	36,627	27,865
TOTAL SUPPORTABLE	**445,171**	**311,056**	**244,112**	**170,187**	**165,919**	**125,847**
Alternative Case - Current Build-Out Scenarios (A2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**146,305**	**123,590**	**103,434**	**104,807**	**28,292**
GAF	46,881	52,597	44,431	37,185	37,679	10,171
Building Materials	45,719	51,294	43,330	36,263	36,745	9,919
Other	37,805	42,414	35,829	29,986	30,384	8,202
Convenience Goods	**314,766**	**345,377**	**289,920**	**240,174**	**246,359**	**67,032**
Grocery	110,850	121,630	102,100	84,581	86,759	23,606
Restaurants	105,176	115,405	96,874	80,252	82,319	22,398
Other	98,740	108,342	90,946	75,341	77,281	21,027
TOTAL SUPPORTABLE	**445,171**	**491,682**	**413,510**	**343,609**	**351,166**	**95,323**
Alternative Case - Route 50 Task Force Build-Out Scenarios (B2)						
	2005	2010	2015	2020	2025	2030
Shoppers Goods	**130,405**	**159,530**	**136,268**	**116,407**	**118,946**	**43,067**
GAF	46,881	57,352	48,989	41,849	42,762	15,483
Building Materials	45,719	55,930	47,775	40,812	41,702	15,099
Other	37,805	46,248	39,504	33,747	34,483	12,485
Convenience Goods	**314,766**	**377,622**	**320,831**	**271,804**	**280,831**	**103,055**
Grocery	110,850	132,986	112,986	95,720	98,899	36,292
Restaurants	105,176	126,179	107,203	90,821	93,837	34,435
Other	98,740	118,457	100,642	85,263	88,095	32,328
TOTAL SUPPORTABLE	**445,171**	**537,152**	**457,099**	**388,211**	**399,778**	**146,121**

Source: BBP Associates

Table 19-A1/A2/B1/B2: Supportable Retail Demand and Projected Retail Supply (Sq. Ft.)
Route 50 Corridor Study
By Retail Category
All Scenarios
2005, 2010, 2030

2005

	Existing [1]	Supportable	Variance	Ratio [5]
Shoppers Goods	**84,255**	**130,405**	**(46,150)**	**0.65**
GAF	20,416	46,881	(26,465)	0.44
Building Materials	42,560	45,719	(3,159)	0.93
Other	21,279	37,805	(16,526)	0.56
Convenience Goods	**253,032**	**314,766**	**(61,734)**	**0.80**
Grocery	171,238	110,850	60,388	1.54
Restaurants	63,030	105,176	(42,146)	0.60
Other	18,764	98,740	(79,976)	0.19
Total	**337,287**	**445,171**	**(107,884)**	**0.76**

2010

	Projected Development [2][3][4][7]	Total Supportable [5]	Variance	Ratio [6]
Scenario A1	1,864,744	710,757	1,153,987	2.62
Scenario A2	1,864,744	756,227	1,108,517	2.47
Scenario B1	1,864,744	936,853	927,891	1.99
Scenario B2	1,864,744	982,323	882,421	1.90

2030

	Projected Development [2][3][4]	Total Supportable [5]	Variance	Ratio [6]
Scenario A1	1,864,744	1,229,221	635,522	1.52
Scenario A2	1,864,744	1,462,292	402,452	1.28
Scenario B1	1,864,744	2,140,461	(275,718)	0.87
Scenario B2	1,864,744	2,373,532	(508,788)	0.79

(1) - Existing retail space (by retail category) based on data provided by Loudoun County Planning Department. Exiting retail uses where classified by NAICS code into the representative retail category.

(2) - 2005 Existing retail development + all approved pipeline development (pipeline totals provided by Loudoun County Planning Department)

(3) - Total projected retail development includes no information of projected retail mix. The projected development total may also include additional retail uses not classified as "Shoppers Goods" or "Convenience Goods". Such uses include those in the NAICS code classification categories: 447 - Gasoline Stations, 454 Non-Store Retailers, and 441 Motor Vehicle and Parts Dealers. The total projected retail development may also include non-retail uses such as 512 - Movie Theaters, 72 - Accomodations (Lodging Facilities), and Office uses that are included in a larger retail structure such as the banks, real-estate offices, etc. typically located in larger multi-tenant retail facilities.

(4) - 2005 Retail Sales to the "Other" retail category (NAICS 447, 454, and 441) accounted for approximately 30% of all retail sales in Loudoun County per the adjusted 2002 Census of Retail Trade. The existing supply of "Other" retail space in the primary market area is 118,260 Sq. Ft. (26% of the total "Shoppers Goods" + "Convenience Goods" + "Other" retail space total of 445,457 Sq. Ft.

(5) - Cumulative 2005-2030

(6) - Ratio of supportable space to projected retail development. Values < 1 indicate that the area is "preserved". Values > 1 indicate that the area is "underserved". A ratio equal to or near 1 indicates that the demand and supply for and of retail space is in balance.

(7) - A 10% reduction is applied to projected pipeline retail SF to reflect retail (and non-retail) space occupied by additional retail uses not classified as "Shoppers Goods" or "Convenience Goods" and other uses such as entertainment (e.g. Movie Theaters) and lodging facilities that may be included in projected retail SF totals

Sources: BBP Associates, Loudoun County Planning Department, 2002 Census of Retail Trade (ES202)

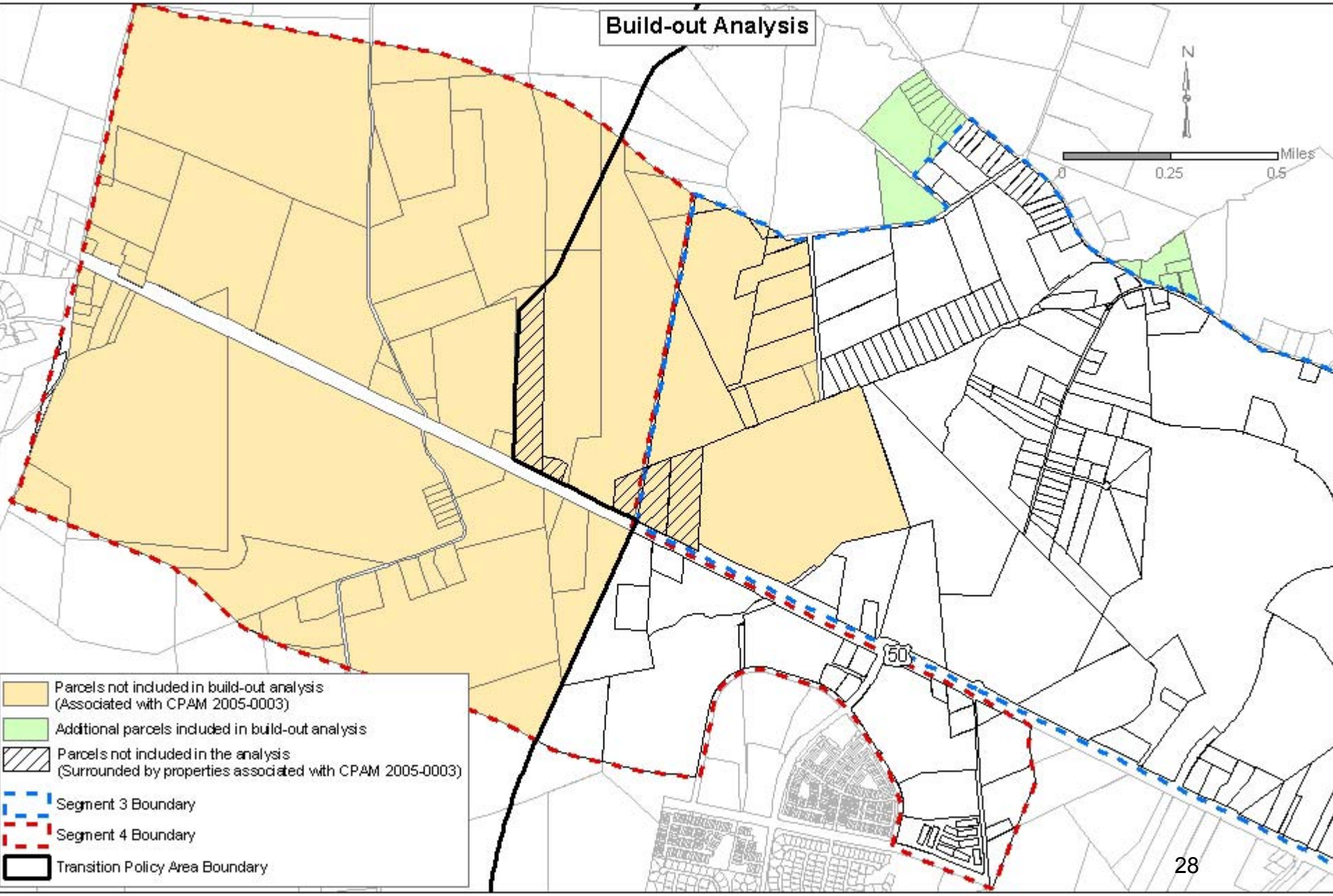
Table 20 Study Area Shoppers and Convenience Goods Retail Inventory (2006)

Route 50 Corridor Study
By Retail Category

	TOTAL SF	Establishments	Avg. SF/Est.
Shoppers Goods	**84,255**	**38**	**2,217**
GAF	20,416	3	6,805
Building Materials	42,560	2	21,280
Other	21,279	9	2,364
Convenience Goods	**253,032**	**16**	**15,814**
Grocery	171,238	6	28,540
Restaurants	63,030	24	2,626
Other	18,764	10	1,876
TOTAL	**337,287**	**54**	**6,246**

Source: BBP Associates, Loudoun County Planning Department

Map 1: Study Area Build – Out Analysis



Source: Loudoun County Planning Department